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REVIEW.

NEC TEMERE, NEC TIMIDE.

An easy introduction to the knowledge of the Hebrew language, without the points. By James P. Wilson, D. D. Pastor of the first presbyterian church in the city of Philadelphia.—Philadelphia: Farrand, Hopkins, Zantzinger, & Co. Fry & Kammerer, printers. 1812.—8vo. pp. 276.

This work, as our readers are many of them perhaps apprized, has been before the public for a year. We have not however till lately seen it. It is for the most part a clavis of portions of the Hebrew scriptures, with references to a Hebrew grammar, subjoined to the work.—These portions are from the pentateuch, the psalms, and Isaiah, and occupy about half of the book. To these succeed sixteen chapters of the book of Job:—the original passages on one page, and the public version on the other, with the roots given in notes. Then follows the Hebrew grammar, which is "that of Mr. John Parkhurst, with as few alterations as were consistent with the plan adopted," by Dr. Wilson.

It will appear from this view of the contents, that the introduction must be a book of some service to learners. It will in a good degree supply the place of Robertson's clavis pentateuchi, which is scarce and dear, as long as it is expedient to use that or other artificial aids. We doubt not the readiest way to obtain a

knowledge of the Hebrew—as well as of any other dead language—is to make vigorous application, first to the grammar, and then to the lexicon. But as the learning of this language is unfortunately deferred by most to an age, at which it is not likely to be imposed as a task, and which is liable to more pressing and interesting calls on the time, innumerable expedients have been devised to relieve the impatience of acquisition. The most ingenious of these, which we recollect to have seen, was a certain horologium Hebraicum, which divided, if we remember, the Hebrew grammar into twelve portions, and provided for the learning of them, in the twelve hours of one day. But who that has tried these expedients, or who that has not, will not testify that there is no royal highway to Hebrew?

This book is called an "introduction to the knowledge of Hebrew," but let not the reader think that this is all. It is related of a countryman of ours—more favored in fortune than in wit—that he was persuaded to send a cargo of skates and warming-pans to the West Indies. The latter, though not wanted between the tropics, in their capacity of warming-pans, were found to be excellent molasses ladles, and were soon in great demand. For the skates there was less promise of a market; till our sagacious adventurer, observing the repute o his pans, refused to sell them, except to those who would also buy a proportionate number of pairs of skates:—a drawback, to which, in consideration of the excellence of the ladles, the planters cheerfully agreed. Thus has Dr. Wilson made up with his Hebrew, a quantity of common place orthodoxy; a pill, which we fear will hardly go down, though proposed with the alternative of losing his introduction. We assure our readers, that besides a system of grammar, we have given us in this introduction, quite a body of divinity. It leads us in fair transition, from the calvinistic (p. 101) to the masoretic points (p. 265) this rule guards us against a solecism, and that against a heresy, and we are initiated at once in radical letters and original sin. But though this is truly unworthy (to use a gentle epithet) we are not quite sure it is ridiculous. It were superfluous to bear our testimony to the honesty of Dr. Wilson's intention, but we know not whether it be more cruel or unmanly to obtrude upon the tyro, who is supposed to use this performance, a catena of doctrinal commentaries.

Dr. Wilson says with implied applause, that "the ministers of the presbyterian churches in the United States, almost universally, read and understand the Greek scriptures for themselves; they can judge of the speculations of various classes of men on the New Testament, and decide without danger; they prefer their Greek concordances to all the commentaries of the learned." This is to the credit of the presbyterians, and we have the pleasure to assure Dr. Wilson that we trust, he might have said quite as much of the congregationalists and episcopalians. But if indeed the Doctor thinks it is right to go to the originals with an unbiassed mind, how does he reconcile it to consistencyand conscience to disfigure every page almost of a mere grammatical work, with some small calvinistic criticism. The first page is furnished out with a proof of the trinity. Upon the word אלהים it is set forth as follows: "that the noun, which is not *unintentionally* here joined with the singular ברא is nevertheless really plural appears &c." The meaning rests here upon the word 'unintentionally,' and we are referred to rule 133, to be informed that the noun mas. plu. אלהים when meaning the true God Jehovah, the ever blessed trinity, is often joined with verbs singular, to express the unity of essence and operation, as Gen. i. 1. ברא אלהים. THE ALEIM CREATED!" Dr. Wilson will do us the justice to believe we are not so quixotic as to expect to shake his opinion on the doctrine of the trinity; nay it would give us pleasure to see him defend that, or any thing else, on manly and magnanimous grounds. He would smile at our simplicity, were we to tell him that all analogy and usage forbid the deduction of the trinity from the word, and that if any plurality is expressed by it, it must be that of gods, not of persons, since the plural number expresses more than one of that, of which the singular expresses one. This is well understood by the initiated—to those who are not, we beg leave to repeat from our first volume page 355, the question of Dr. Geddes: "What! doth a term which is equally applied to Belzebub, the god of Ekron, to Chamosh, the god of Moab, to Moloch, the god of the Ammonites, to the gods of Hamath, Arphad, Sepharvaim, Ena, and Ava, denote the ever blessed trinity? Yet to all these obscene deities the term אלהים is applied by the Hebrew writers"*—and they must all of them of course be trinities. How much better is it to agree

* Dr. Geddes' Critical Rem. p. 7.

with Jerome, that the word is both singular and plural, denoting both one God, or more, than to follow the fancy of a dreamer* of the XII. century, because he happens to furnish us with an argument for a dogma. Is Calvin's authority nothing, who thus comments on the word? "*Deus:*—the original is אלהים, a noun of the plural number. From this it has been inferred, that the three *persons* are noted; but as this seems to me an incompetent proof of so great a thing, I will not insist upon the word. I would rather warn the reader to avoid such *violent glosses*. For while they think they gain here an argument for the divinity of the Son and Spirit, against the Arians, they *involve themselves* in the *errors of Sabellius*. For Moses immediately after adds, Elohim spake, and the Spirit of Elohim moved on the waters. So that if the three persons are meant to be denoted, they are confounded: And it will follow, that the Son was begotten by himself, and that the Spirit is not of the Father, but of himself. These absurdities prevent me from wresting that to the Persons, which Moses applied more simply to God himself." [Calvin in loco.]

In remarking also upon "Let us make man," the Doctor assures us it is an expression of consultation; thereby taking upon himself the responsibility of finding an answer to Isaiah's ques-

* Peter of Lombard, to whom we owe so great a thing as an original argument for the trinity—and that so notable a one—was a light of the XII. century. He was born at Lombardy, was two years bishop of Paris, and died A. D. 1159. He wrote a commentary upon the psalter—upon Paul's epistles, and several sermons. But his principal work was "Sententiarum libri quatuor"—in which "veterum patrum sententias collegit." See the notice of him in Henry of Gaunt (surnamed the solemn doctor) de Script. Ecc. p. 123, and Trithemius de Script. Eccl. p. 96; in Fabricius' Bibliotheca Ecclesiastica. It was the book Sententiarum which gave Peter his name of "*Master of Sentences.*" He is mentioned also by P. Jovius hist. lib. 3. with the appellation, Lumen omnium. Semler observes, that he borrowed the foundation of his work from the famous and unfortunate Abelard, and from Robert, the restorer of the University of Oxford,—(Semleri Selecta Capita, Tom. iii. p. 165.) Though he professed, it seems, to collect the opinions of the fathers, he occasionally broached one of his own—such as that in question upon the signification of אלהים. This we give upon the authority of Sixtinus Amama (Anti-Barbarus biblicus. l. ii. p. 281) and Simon adduces Sixtus of Siena, as saying, that "those, who apply this passage to the mystery of the trinity, do not follow in that the authority of the fathers, but of Peter of Lombard, who just glanced at this in in his book of Sentences." Simon histoire Critique, du V. T. p. 420.

tion, "Who hath directed the spirit of the Lord, or being his *counseller*, hath taught him; with whom *took he counsel?*

Job is supposed by Dr. Wilson to be a "Gentile book," and a "valuable relic of the ancient Gentile religion; but yet, p. 229, he is half inclined to find in it the doctrine of Christ's intercession, a doctrine with which we suppose the Gentiles, before the time of Moses, were not very familiar.

On Gen. xi. 17, 'for in the day thou eatest thereof, thou shalt surely die,' we have that most ingenious explication by which it is proved, that death means everlasting *life* in misery. "מות does not always import temporal death. Vid. 1 Sam. xxv. 37. Prov. ix. 18. and xii. 28. [In all of which however, either originally or metaphorically, it does signify temporal death.] As life may mean either happiness, or animal, spiritual, or eternal life; so death has as many senses directly opposed to these. Its meaning in this place must be collected from the nature of the life, which it would destroy. Man was constituted holy, death implies sin; he was in a state of friendship with God, death implies enmity against him; he enjoyed every production of the earth which tended to his comfort, death implies that the earth should be embittered to him; he enjoyed peace, death implies that his state should be that of warfare; he enjoyed health, death implies that he should be subjected to disease; in a word, as without sinning he was to be free from death, that is everlastingly happy, death implies everlasting misery." If this be an easy introduction to Hebrew, what would the Doctor give us in a doctrinal commentary?

There is a criticism upon אור "light," in Gen. i. 4, 5. "Let there be light and there was light," in which we are told, that "caloric or latent heat was intended!" More is here meant for the mind than meets the eye. This transfer of the honor of the invention of the doctrine of caloric to Moses, is intended to guard the notion of verbal inspiration, against the objection, that this creation of light is inconsistent with the subsequent creation, (Gen. i. 14.) of the sun, the common source of light. How would it have revolted Longinus, who held up the sublimity of Moses to the heathen world,* to hear the passage, in which he saw that sublimity, explained down into "let there be caloric, and there was caloric." It is unfortunate for this exposition that the "latent heat" was some-

* De sublimitate, § 9.

thing to be seen, v. 4; and though we are told of darkness visible, we suppose it is a property of latent heat, to be for the most part invisible. Seriously, what unfortunate passion is that for polemic fancies, which can debase the glorious effusion of elemental light, the sublimest conception perhaps on record, into a notion from the laboratory, the evolution of caloric!

On page 58 of this easy introduction to the knowledge of the Hebrew language, we have an argument for the miraculous conception; a doctrine, the rational believers of which would have defended upon better grounds than it often is. "I will put enmity between thee [the serpent] and the woman, and between *thy* seed and *her* seed." "Messiah," says the Dr. "was called the seed of the woman, not the man, because he was to be born of a Virgin." If this be a good argument, it would prove the miraculous conception of all men; for Job says, "man," meaning all men, "man, that is *born of a woman*, is of few days." Immo ex ipso textu, hoc argumentum non solum conceptionem miraculosam omnis hominis probaret, sed etiam serpentum—I will put enmity between thee [the serpent] and the woman, and between *thy* seed and *her* seed. Nunc si *her* seed de fœminâ dictum, puerum virgine sine viro natum significet, tunc pariter *thy* seed de serpente dictum, anguem serpente unius sexus sine altero natum significabit. Et, quod haud parum difficultatis affert, serpens in textu fuit mas, quod liquet ex ונחש היה. Ubi היה generis masculini est.

Upon page 119, Dr. Wilson extracts from this text, "deliver my darling from the power of the dog," and intimation of the hypostatical union!! The original of darling is יחידתי, "my only or beloved." This he thinks fit to render "my united one;" and to say, "that it may refer either to the union of his [Christ's] body with his soul, *or of his humun with his divine nature*," &c. We know not but this is good "presbyterian" criticism, but it will not stand on our Cambridge platform. יחיד from meaning an "only child" is applied to a "beloved child," and from thence to any beloved object, as here to the soul. "Deliver my soul from the sword, my darling from the power of the dog." See Repository, vol. ii. page 244.

Dr. Wilson generally gives us an etymology—but in such a way as to confound our ideas of the use of that part of grammar. He has followed Parkhurst, who is often absurd enough himself,

but not so much so, as he appears in Dr. Wilson's abstracts from him, in which the links, that connect his etymons with the words supposed to be derived from them, are omitted. Thus, page 11, we are told, that ארץ "the earth," is derived from א formative, and רצ *to break in pieces.* Parkhurst lets us know, upon the authority of Boerhaave, that earth is "friable," easily broken in pieces; and therefore called ארץ from רצ. But we would humbly suggest, that "earth," "friable earth," is one thing, and *the* earth, הארץ, quite another, and that there are few things less friable than the terraqueous globe, built on its central rocks, and crowned with the everlasting hills. We observe in passing, that ארץ is one of the examples by which Mr. Whiter illustrates the leading principle of his system, at once so ingenious and so fatal to all former etymologists, "that in all languages, the same ELEMENT" (that is, the combination of the same or allied radicals) "conveys the same train of ideas." The element of earth he considers to be eaRTh—RT—, which he traces in the aRTz of the Hebrew, eRD of the Arabic, &c.* Parkhurst derives יום day, from המ "tumult and tumultuous motion;" and explains it of the agitation in the air, produced by its expansion in the sun's rays. But as whatever is tumultuous is noisy, the Doctor derives the same word from המה "*to make a noise.*"

אין "not, nothing," &c. is derived from אנ "to labor." Of this etymology, a trace is found also among the vulgar, who when they would say a man has *nothing* for his pains, they say "he has his *labor* for his pains."

Page 136. And the parched ground shall become a pool והיה השרב לאגם. Dr. Wilson, after Parkhurst, derives השרב the parched ground, from שרף, to burn. But the change of ב for פ is rather a violence. In the Edinburg review of the 2d. vol. of Dr. Clarke, (ascribed to Sir William Drummond) this word is traced to the Arabic al serab, by which the curious phenomenon, called le mirage, is designated. "And the serab (the illusory lake in the desart) shall become a real pool." This had been already remarked by Bp. Lowth, and is indeed ingenious and beautiful, but seems to be opposed by the parallelism of the passage. "And the parched ground shall become a pool, and the *thirsty land* springs of water." Here צמאון the thirsty ground can hardly be understood of this

* Introduction to Etymologicum magnum, p. 24.

phenomenon, and appears to demand a literal translation of its corresponding שרב.

Dr. Wilson expresses his thorough conviction of the novelty of the Hebrew points. We forbear to say any thing of our own upon this subject, that we may gratify our readers with Eichhorn's sections upon it:—which we have translated from the first volume of his Einleitung ins A. T.; and to which we have attached a few notes, included in brackets, where illustration seemed necessary. All the notes, not thus included, belong to the most learned author himself.

In his introduction to the Old Testament, Eichhorn commences at the 2d chap. vol. i. a history of the text. He begins with general observations upon its preservation. "Time," says he, "has wrought a miracle in preserving our little Hebrew library—who would ask it of his hands, without any imperfection?" In entering the particular description of the subject, he speaks of the materials, upon which, and with which, the books of the Old Testament were written; and next of the original alphabet. This he supposes to have been what he calls the Phenico-Egyptian [Phönicisch-Egyptischer], that is, that variety of the Phenician character, which was used in Egypt during the sojourn of the Hebrews, and which Moses must have learnt there. Our present square Chaldee character was introduced, he thinks, upon the return from the Babylonian exile, and then commences, as follows, the subject of THE VOWEL POINTS.

THE Phenico-Egyptian character had several points, as may be seen from Buttner's(1) comparative tables. The Hebrew writers

(1) ["Christian William Buttner's comparative tables of the alphabets of different nations of the past and present ages, Gottingen and Gotha, 1771." Of this work we learn from a review of it by Michaelis, that it contained the result of the labor of many years. The tables are three. The FIRST contained different Hebrew alphabets; and four Syriac alphabets, and six Arabic. The SECOND contained five Phenician alphabets, from coins and monuments—the ancient Egyptian alphabet, from inscriptions *on the bandages of mummies*, and three old Spanish alphabets. The THIRD table contained old Greek, old Italian (Etrurian and Pelasgic) and Scandinavian alphabets. It is the alphabet from the bandages of mummies, that Eichhorn calls the Phœnico-Egyptian, and in which he supposes Moses and the succeeding writers wrote. Michaelis makes these inter-

then, who used this character *may* have furnished their writings with vowels. Yet it was not necessary that they should. For as the Arabians, in the first centuries after Mahomet, wrote their Koran entirely without vowels, but were not the less able to read and understand it,* and as the Persians in our day read with ease their books without vowel points,† so, no doubt, a native Hebrew, while his language was yet a living one, could read the ancient books of his nation, without much difficulty, although they were written without vowel points. Nor is it probable, that the authors of the Old Testament furnished their writings throughout with points; for

1. The ancient versions universally, that of the LXX, of Aquila, Symmachus, Theodotion, Jerom, the Syriac, Chaldee, and Arabic,(2) (if indeed this was made from Hebrew), depart in all the

esting remarks upon this alphabet—"This discovery is very important to the Hebrew tongue, and promises to throw much light on the inquiry into the age and origin of the vowel points, and upon the numbers [the text of the numerical calculations] of the Old Testament. It is true, that Mr. Buttner has not been able to ascertain the sound or the signification of the characters; but three things are remarkable. 1. The number of the characters is twenty-two, just the number of the Hebrew. 2. The vowel points are placed over and under the letters, as in Hebrew, and consist of points and short lines. 3. The Arabic cyphers, so called (which we have borrowed from the Arabs, and now use), appear on these inscriptions upon mummies. It is therefore probable, that these cyphers may have occasionally been used to express numbers, by the original writers of the Old Testament. Kennicott suspected this from certain various readings of the numbers, and it may be brought, by other examples, to a still higher degree of probability."—Michaelis Orientalische und Exeg. Bib. Th. i. 16. Eichhorn gives an engraving of this alphabet at the end of his first volume.]

* Herbelot Biblioth. Orient. p. 87. Sale proleg. in Koran.

† Chardin's voyage en Perse. T. iii. p. 148.

(2) [The author speaks here of the Arabic somewhat indefinitely. In the part of his work, which treats expressly of Arabic versions, he says, "The first *certain* traces of Arabic versions, which we have, must be referred to the tenth century; but who knows if we may not even have printed fragments of older versions? Some of the Arabic versions were made by Jews and Samaritans, and some by Christians—Some are children of the Hebrew, others grand children and great grand children. The former have some the Jewish-Hebrew, and some the Samaritan-Hebrew for

books of the Old Testament, not only from our present punctuation in innumerable places, but differ also from each other in the pointing of particular words. Can we suppose, that not one of them possessed a punctuated manuscript, though they were ever so scarce? Shall we not rather conclude, that there was not yet any manuscript which was pointed throughout. The Chaldee paraphrase indeed agrees much oftener, than any other ancient version, with the masoretic text. This agreement is sometimes happy, and sometimes sufficiently otherwise, for instance in cases where the most diffident and cautious critic will resign the masoretic punctuation. This agreement was not produced by the paraphrasts' having before them manuscripts pointed throughout, for after all they differ in innumerable places from the present punctuation (3) It may be accounted for by supposing that those, who

their basis. The second are from the Peschito and the LXX, and the third from the Philoxenian (Græco-Syriac), and the Græco-Coptic—But alas, of these different kinds of Arabic versions we know little enough. The most of them lay unprinted and unknown in libraries. I will describe those, with which I am acquainted.

I. Five made directly from the Hebrew, viz. 1. that of R. Saadias Gaon; 2. that of the book of Joshua in the Pol.; 3 that of Erpenius; 4 that of R. Saadias Ben Levi Asnekoth; 5. a Samaritan Arabic version of the Pentateuch.

II. Five of a Syriac original, viz. 1. that in the Pol. of Job and the Chronicles; 2. a Psalter, printed at Kasheja, in the convent of St. Antony, An. 1610; 3. a similar Psalter in the British museum; 4. a Pentateuch by Abulfaradsch Abdallah Ben Attajeb; and 5. the Syriac Hexapla of Hareth Ben Senan.

III. From the LXX, the books, of the Old Testament in the Lond. Pol. except the Pentateuch; and an unprinted Pentateuch, in the Medicean library, &c.

IV. A complete Arabic version from the Coptic is found in the library of the college of the Maronites at Rome.

V. From the Vulgate were made the missionary Arabic version of 1671; and that of Raphael Tuks." Of these several Arabic versions he proceeds to give a particular description and critique. Einleit. ins A. T. Theil. i. p. 491—493. Next to the account of Eichhorn, the best view of the Arabic versions of the Old Testament is in Simon's Histoire Critique du V. T. lib. ii. c. xvi. et xix.]

(3) [The force of this, and of the equivalent remark just above, depends upon the probability—which no doubt is very great—that if there had been pointed manuscripts of the Old Testament, at the time the Chaldee para-

furnished the Bible throughout with points, consulted the paraphrases as it were a church version; and attained the sense of the Old Testament by means of their interpretation, as our expositors avail themselves of Luther's translation, to which they have been accustomed from their youth, as the masorites to the Chaldee.

2. Origen, or whoever was the author of the Hebrew text, written in the Greek character, which this immortal critic introduced into his Hexapla, had not a manuscript pointed throughout, but wrote the Hebrew words according to a pronunciation very inconstant in itself, and very different from ours. This appears from any part of Montfaucon's Hexapla. For example, Hosea xi. i. χι νες Ισραηλ ουηαβηου ου μεμεσραιμ καραβι βανι, where נער is written with two segols instead of two patachs, and ואהבהו with shurek, tsere, and hirik, instead of shurek, kametz, holem, and hataph patach.

3. Jerom speaks of his manuscript, in a way inconsistent with its being pointed throughout. Sometimes he finds words, which he is obliged to explain, because, for want of vowel marks, their signification and pronunciation are undecided. Sometimes all this would seem to be settled by vowels. Habbakuk iii. 5. he says, "Pro eo quod nos transtulimus 'mortem,' posita sunt, in Hebro tres literæ דבר absque ulla vocali, quæ si legantur dabar verbum significant, si deber pestem.* On the other hand, Genesis xlvii. 33.

phrases were made, they would have coincided with the masoretic manuscripts; that is, they would have been followed by the masorites, when they gave their edition of the sacred text Now, though in the main the masorites would have followed the authority of previously existing pointed manuscripts, supposing there were any such, still they might have occasionally departed from them. For they have the credit—and probably with justice—of having exercised their critical talents—such as they were—with great diligince. Aben Esra—as quoted in Buxtorf's Tiberias, c. iii.—assures, us "that he had seen books of the wise men of Tiberias, in which fifteen of their elders attest, that they had examined every word, and every point, and every phrase, full or defective, thrice or four times, and lo! Jod was universally found in תיעשה. Ex xxv. 31." If they ever departed however from the authority of the manuscript which they consulted, they cannot be supposed to have done it so often as the ancient versions do from the present masoretic reading, and thus our author's argument, though not perfect, is good.]

* Compare Jerom ad Jeremiah ix. 22. ep. ad Evagrium, 126. Quæstio-

his manuscript decided, by its marks, that מטה 'bed' and not מטה 'sceptre,' must be read. "Hoc loco," says he, "frustra insimulant adorasse Jacob summitatem sceptri Josephi, quod videlicet honorans filium potestatem ejus adoravit, cum in Hebræo multum aliter legatur, et adoravit Israel ad caput lectuli." Compare his questiones in Gen. xxvi. 12.(4)

4. The Talmud too, in its disputes upon passages of the Old Testament, sometimes implies pointed words and sometimes unpointed. When the Talmudists contend whether Exodus xxi. 8. Bivvagedo bah or bevigdo bah, or Leviticus* xii. 5. whether shevengim or shevungayim,† is to be read, this distinction of pronun-

nes in Genesis xxxvi. 24, &c. Upon the vowels in Jerom's Hebrew manuscript, see Repertorium vol. ii. p. 270, and Dr. Tychsen in reply, vol. iii. p. 127.

(4) [This authority was adduced by Buxtorf the son, in his reply to Capellus; nor do we find that Capellus particularly answers it, in his vindicæ. Yet we cannot but think it incorrectly urged, both by Buxtorf and our author. As the passage is given indeed in the text, the argument is plausible, since, as the mere consonants מטה are equivocal—Jerom would not have said as he does, "it is far different in the Hebrew," if there were not points to indicate this difference. But the word occurs in the next chapter of Genesis; when the LXX translate it correctly "Bed." Upon this, says Jerom—"I know not the cause why the LXX have translated the word differently in the different places," &c.—And Buxtorf asks with some triumph, "How could Jerom have said he knew not why the LXX translated at different times, if there had not been points which forbade such different translation?" But on the contrary, if there had been such points, Jerom would have known very well, why they translated the same word by "staff" in one place and "bed" in another; and if he had said any thing, would have said that the points ought to be—or were—the same in both cases. Buxtorf de Punct. Orig. &c. p. 148, 149. and Heronymi Opera T. i. 225. Basil. Ed. 1565.]

* Tract. Kiddusch. c. i. fol. 18. ab. 68. Tract. Saned. c. i. fol. 4. p. i. See Dr. Tychsen on the age of the Hebrew points in the Repertorium, vol. iii. p. 105. I can avail myself of many of his learned remarks in favor of my opinion, though it is different from his.

† Without the supposition of some marks it will be impossible to explain the pronunciation, which has been chosen in various passages. Job xxxi. 36. etaroth stands in the plural, though ateret would better suit the context. Zach. vi. 11. one would be glad to dispense with ataroth; yet the Septuagint must have been made from a manuscript with marks that decided for the plural here, since they render it στεφανους. In other

ciation, in words whose consonants are the same, implies certain marks, by which the pronunciation can be decided. But if in the time of the Talmudists there were manuscripts pointed throughout, there would not occur so many discussions of the pronunciation of single words. They would have appealed to manuscripts, by which they would either have ended the controversy, or led into questions upon the value of manuscripts, thus and thus pointed. But this appeal is never made. On the contrary, Joab ends the controversy whether Deuteronomy xxv. 19. zachar or zecher should be read, by his bare dictum, as Alexander decided the question of the Gordian knot with his sword.(5)

Finally, the Tractate sopherim says nothing of points. Why did it not order the transcriber of the Thora, to leave his copy unpointed?(6)

places the vowel points are so happily placed, that we must needs consider them as an aid to the signification from the author's own hand. For instance, 1. Sam. ii. 21. zeroah. Exodus xxxii. 18. anoth, &c.

(5) [We do not see what hinders the application of the learned author's argument as well against the punctuation of single words, as to that of the whole scriptures. Why would they not have appealed to the points, had there been any in the cases adduced of Exodus. xxi. 8 and Levit. xii. 5? Nay, would not the pointing of some few words have been notorious, as it were for its very singularity, and mentioned on that account? For the rest, the allusion to the Gordian knot in the text, which may seem insipid, becomes very lively and pleasant, if we consult the story in the Talmud.—"When Joab appeared before David, after having slain the males of Edom (1 Kings xi. 15.) David said to him, 'why hast thou done this?' (That is, destroyed the men alone, and not the women.) Joab replied, because it is written (Deut. xxv. 19.) "thou shalt blot out the male of Amalek:" zachar, the male. David said to him—"but we read 'zecher' 'the memory.' But Joab rejoined, "I read zachar, 'male;' and went and asked his master, "how hast thou taught us to read this?" The master said, zecher 'memory;' so Joab drew out his sword, and said, it is written, "cursed be he who keepeth back his sword from blood," and slew him. Talm. Bava bathra. c. 2. f. 21. In Capelli Arcan. p. 711. edit. Amstel. et Buxtorf de punct. orig. p. 108.]

(6) [To understand the force of this argument, it must be observed, that the tract sopherim (which is a supplementary tract to the Talmud, of a later age—Wolf. Bib. Heb. ii. 752) is wholly taken up in giving instructions for the transcription of the Thora, and yet makes no mention of the points. Now it is a maxim among the Jews, (Buxt. de punct. or.) that

The writers of the Old Testament used vowel points occasionally.

From these remarks it follows, 1. That down to the fifth century of the Christian æra, there are many facts inconsistent with the supposition of a punctuation, which extended throughout the Bible. 2. There are in Jerom and the Talmud sufficient traces of vowel points and of the punctuation of words and passages. To unite and reconcile these contradictory appearances, we may suppose, that occasionally single words and passages were pointed by the original authors themselves, or in the ages immediately succeeding.

1. Such a punctuation, by which, here and there, occasional passages were decided as to sense and sound, would be useful. No doubt in most cases, a native Hebrew would find as little difficulty in reading an unpointed manuscript, as the ancient Arabians or modern Persians. But there must be passages, where an ambiguous word would expose the meaning, to be mistaken: as Numbers xii. 6, 7. מראה, or Genesis xi. החמר היה להם לחמר. A couple of vowels adjoined here, would during the life of the Hebrew have removed all ambiguity. And after the death of the Hebrew language, providence guarded against the mistakes, which would arise in the reading of a book, written in consonants without vowel points, by raising up grammarians, who by their acquaintance with their native tongue were competent to the furnishing all its words with vowels.

2. This partial punctuation is agreeable to analogy. In Arabic and Syriac manuscripts, we find the sense of equivocal passages occasionally decided by vowels attached, which may have been from the author's own hand.

3. Such a punctuation is not impossible, for it is a groundless assertion, that in the invention of the oldest eastern alphabets no thought could have been had of vowel points. Syllabic writing must, in the order of human improvement which history displays,

a pointed Thora is profane, and it is always written without points. So that had points been known when the sopherim was composed, this maxim would have been either contradicted or confirmed. Thoras are copies of the law, written with great care, deposited in the Synagogues, and hence called Synagogue rolls. Simon. Hist. Crit. l. i. c. xxj. Capel. Arcan. punct. rev. p. 710 et Seq.]

have preceded alphabetical writing.* And we find in all eastern alphabets, with which we are intimately acquainted, original and borrowed, three vowel points.

I. The Phenico-Egyptian alphabet, from the bandages of mummies, is furnished with vowels, and, as I think, with three. See Buttner's comparative tables, tab. ii. p. 2. comp. p. 13.

II. The same is true of the Syriac alphabet. The Sabæo-Syriac Syllabic character, with which the Nabatæ (Christian disciples of St. John) wrote, had three consonants, to which vowels were attached. Buttner's tables. tab. i. p. 3. The Syriac alphabet, in which the Syriac version used by S. Ephrem S. in the fourth century was written, had vowel points for the determination of the sense and pronunciation of such words, as would not be decided by the consonants. Sciendum est, says he, Gen. xxxvi. 24. quod in utroque hucusque testamento semper chemre invenerimus, non autem chmore ut putant aliqui ex inscitia.† From this passage it appears, that the Syriac alphabet before and in Ephrem's time, had vowel points, but not how many. But from the history of the Syriac language, it is most probable, that three vowels only belong to it. For after the expiration of the sixth century, when the Syriac Cadmus, Mar Amer, penetrated to the Arabians, he taught them only three vowel points; at least the Cufic character has but three ‡ In the year of our Lord 770, they had not so many vowel points, as there are Greek vowels. For when at that time, the Maronite, James of Edessa, wished to translate Homer into Syriac he had not vowel points enough to express in his native Syriac, the Greek proper names. He was

* Herder in his spirit of Hebrew Poesy, vol. i. p. 28. says very pertinently, "Who could write in letters, without the breathing [vowels,] which gives them their life, and force? Since it is upon this that all depends, and which must be denoted according to some system like the different musical tones. And though to invent alphabetical consonants is the greatest labor, yet we are not to suppose that the smaller, of adding the vowels, which were necessary to give efficacy to the former, was neglected."

† Ephræm. Opp. T. i. p. 184, in Catena.

‡ Adler descriptio Codicum quorundam Cuficorum. Vid. p. 30, and the tables annexed.

therefore obliged to place the Greek vowels over the Syriac consonants."(7)*

Now the Syrians, before the time of Ephrem, probably wrote in the character of the Palmyrene inscriptions, (8) which in part at least must be ascribed to the first century. This character is pure Hebrew, and very like our square character.† Our square character therefore, in which the books of the Old Testament have been written ever since the Babylonian antiquity, we may infer was also provided with three vowels. It is true that no vowel points can be traced in the Palmyrene inscriptions. But on marbles and coins, such minutiæ as these, which are so hard withal to engrave or stamp, would naturally be, and usually are neglected.

Or if it be maintained that the Syrians, before Ephrem, used

(7) [The translation of Homer into Syriac appears to have been confined to two books. At least Abulpharagius says, that Homer, whom he places in the time of Jotham, "composed two books of the wars, which happened to the Greeks against the city Troy, a copy of which is found among us, written in Syriac. They are filled with ænigmas and allegories," (Abulpharag. hist. dynast. 148.) If the translation were not more faithful, than this criticism, it is not to be regretted, that it was confined to two books—Again—"In the time of Tola, the son of Pua (Jud. x. 1.) Tarsus was built, and the city Troy destroyed. Homer relates it in two books, which THEOPHILUS, the astronomer, of Edessa, translated into Syriac." Hence appears the error of our author, who repeatedly ascribes this translation to James of Edessa. Asseman more than once gives authorities that Theophilus was the translator of Homer. (Bib. Orient. i. 521. ii. 311.) Fabricius (Bib. Græc. i. 300) does the same, and refers to Labbeus as saying he had seen a manuscript copy of the version.]

* Abulpharagii historia dynast. p. 40, and 228. Assemani Biblioth. Orient T. i. p. 64 521.

(8) [The ruins of Palmyra, (Tadmor in the desert) were first visited by two English merchants, of birth and rank, in the year 1690. (Symth et Bernard inscriptiones Græc. Palmeryn. præf.) They were visited again in 1751, by a party of travellers, among whom were Messrs. Wood and Dawkins. The former has given a splendid series of engravings, containing the inscriptions, views of the ruins, and architectural specimens; the whole prefaced by an ample history.—(Wood's Ruins of Pal.)—Mr. John Swinton also has given copies and explications of the Palmyrene inscriptions, in the Philosoph. Transact. vol. xlviii. part 2d.]

† Buttner's Comparative tables. tab. i. p. 1. col. 1.

the Estranghelo, this must from the former considerations have had its three vowels. Now the Estranghelo is so much like the character of the Palmyrene inscriptions, that the former must have been derived from the latter, or the latter from the former. In either case my conclusion, with respect to the vowels of the square Chaldee, will hold. Even our present punctuation would seem to have flowed from three vowel points. 1. The Sheva is joined to the A, E and O, which may be compared with the three vowel points of the Arabs, the Phatha, Kesre, and Damma. Would it not have been joined with others, as Hirick and Kibbutz, if our numerous marks had originally existed? Perhaps the division of the Jewish grammarians into simple and compound vowels, is to be considered as favoring this system. Perhaps this division was made use of after it became customary to discriminate not only the principal tones, but the semi-tones; and was introduced by an oral tradition of the later Rabbins. According to Aben-Esra, Holem, Hirik, and Patach, are single vowels and the others, the compound, arose by uniting several points and marks. If in the oldest times, the simplest marks, which we now use of the vowels of each class, expressed all the shades of the tones in the class, then we may suppose that a point over the word, expressed the class O, a point under it the class E, and a fine stroke under the word the class A. This simplicity of marks, and of the representation of vowels, is preserved in the Kufic and modern Arabic alphabets. Does not the analogy of all eastern languages favor this system of punctuation?*

Result of the inquiry.

From the preceding considerations, it seems to me highly probable, that the ancient Hebrews had vowel points; but instead of the whole number which we have at present, only three. Also

* What in conformity with my plan I have given but briefly here, is shown in a very lucid manner and at length by Prof. Trendelberg in the Repertorium xviii. In general, the high antiquity of our present artificial punctuation would for its mere refinement, long since have been given up, if the inquiry had not been conducted by mere scholars of the closet, to whom the greater the refinement the better, and who deceived themselves so much as to think that all the varieties of tone either could or need be represented.

it is probable that the ancient Hebrew writers furnished their manuscripts with points, but not throughout—here and there only—in ambiguous passages, and that our present system of punctuation was introduced after the Hebrew became a dead language. Sufficient provision was made for understanding the meaning and pronunciation of the language, while it was a living one, by denoting with a mark the general tone, which was to be sounded upon each syllable. The finer distinctions of tone, which belonged to the general tone, would be understood in a living language without marks. After the language began to cease to be spoken, or had quite ceased, it would be difficult to attain the proper pitch of the general vowel point, which denoted a class of sounds, and to pronounce each word with its peculiar intonation. It became necessary therefore to discriminate the minor tones, which were comprehended under the same general point, and to provide its appropriate mark for each. But because from the death of the language, it was not possible to give in every case the minor tone which was meant to be expressed by the general point, or because the ear of Jews, who commenced our system of punctuation had been corrupted by the intermixture of foreign dialects; or because even during the life of the Hebrew, the allied semi-tones were interchanged with each other; or finally because it was not possible to represent all the niceties of tone by written marks—in the introduction of the system the same word was in different places arbitrarily pointed, with different vowels of the same general class. This is the origin of the arbitrary interchange of vowels, which is such a great obstacle to the learning of Hebrew, and the principal difference between the Hebrew and other eastern languages.

History of the controversy upon the age of the Hebrew points.

Jacob Perez de Valencia, in his commentary upon the Psalms, first denied the received inspiration of our present punctuation. Elias Levita, next after him, was of the same opinion: Deyling therefore might have spared himself his congratulation of Christendom, that it was no Christian, but a Jew, (referring to Elias) who had broached the fable, as he called it, of the modern origin of the points. From this time the question of their antiquity was tossed about—the ball of philological controversy. It was conducted with most animation by the Buxtorfs, father and son, with

Capellus. Buxtorf the father announced his system in his Tiberias, c. viii. p. 8—80. Against this Capellus wrote his arcanum punctationis revelatum, to which Buxtorf the son, in his tractatus de punctorum origine antiquitate, &c. rejoined. To this Capellus replied in his vindiciis arcan. punct. revel. which, together with his first work, are reprinted in his Commentaria et notæ criticæ. Amstel fol. 1689. Since this time the learned have made themselves partizans, some of Buxtorf and some of Capellus. Buxtorf's grounds for the antiquity of our punctuation were, 1. The sense of the Old Testament would be uncertain without the vowel points: 2. Vowel points are included under μια κεραια, Matt. v. 18. 3. Some passages from the Zohar and the Talmud. Capellus and his followers on the contrary appealed to the ancient Samaritan alphabet on coins, which are without vowel points: 2. To the unpointed manuscripts, and especially to the unpointed Thoras: 3. To the ancient translators of the Bible: 4. To Origen and Jerom: 5. The Talmud and Corpus cabbalisticum. See Tychsen upon the age of the Hebrew points. Repertor. Th. iii. p. 102.

In later times Schultens has, in my opinion, been most successful in the inquiry. He considers, that agreeably to the analogy of the other eastern languages, some vowel points must have been very old, and used perhaps by the writers in the Hebrew tongue. He no where however fully unfolds his system. Schult. instit. Ling. et lib. 3. p. 48. 62. After him Hr. R. Michaelis has treated upon the "Indecisive grounds of the antiquity of our present punctuation." To examine the grounds, which appear to me *decisive* consult, beside the above named writings, Dupuy's dissertation philologique et critique sur les voyelles de la langue Hebraique, in the histoire de l'academie des inscriptions et belles lettres. T. 36. Paris 1775. Matthew Norburg's dissertat. de Hebræorum vocal. Lond. 1784. 4to. Trendelberg's dissertation in the Repertorium, Th. xviii. n. 2.

ARTICLE 7.

A course of Mathematics in two volumes, for the use of Academies as well as for private tuition. By Charles Hutton, L L. D. F. R. S. late Professor of Mathematics in the Royal Military Academy. From the fifth and sixth London editions. Revised and corrected by Robert Adrain, A. M. fellow of the American Philosophical Society, and Professor of Mathematics in Queen's College, New-Jersey.—New-York: Samuel Cambell, & Co.—8vo. p. 583 and 598.

From Dr. Hutton's preface it appears, that his object was to compose a short and easy course of Mathematics, for the purpose of academical education, to contain the most useful principles, disposed in a convenient practical form, with concise demonstrations and examples for illustration. Several editions were published in two volumes—a third volume, composed by the joint labours of Dr. Hutton and Dr. Gregory, was added to the edition of 1811, to make it conform to the improved plan of education at the Royal Military Academy at Woolwich, for which the work was more particularly designed. This additional matter has been differently arranged by the American editor, to incorporate it with the similar articles of the other part, and the whole work, with several additions and corrections, is now given to the American public, in two volumes, of a convenient size.

That the reader may form some idea of the work, we shall give a very brief abstract of the several articles, taking them in the same order as in the American edition, and shall add such remarks as may occur in the examination.

1. *Arithmetic* contains most of the rules usually given in treatises on this subject, with a variety of examples for illustration. Several useful rules are however omitted, such as Practice, Circulating Decimals, &c.

2. *Logarithms.* This includes a brief explanation of the principles and a method of computing logarithms, with the uses of these numbers in multiplication, division, involution, and evolution.

3. *Algebra.* This article embraces the usual introductory definitions and rules, the method of solving simple and quadratic equations, and a collection of questions to exercise the learner. Car-

dan's rule for cubic equations is given, but without a demonstration and the method of investigating the roots of cubic and higher equations by approximation is explained. Then follow the algebraical formulas for computing simple and compound interest and annuities.

In several of the examples the roots are not all given. Thus in page 253, vol. 1, all the *negative* roots are neglected. The value $x=0$, in the 13th example, page 236, is not noted. The 4th and 5th examples, page 243, are *indeterminate*, instead of having *definite* values, as we should be led to infer from the answer to the 4th example. These omissions have a tendency to embarrass the student, and they ought to be corrected in an other edition.

The subject of this article is resumed in the second volume (from the third of the English edition) under the title of "nature and solution of equations in general," in which are given several of the well known theorems for computing the powers and products of the roots from the coefficients of the generating equation, the method of transforming equations to others, having roots of difdifferent values, rules for solving quadratic and cubic equations by the table of sines, tangents and secants, and Euler's method of computing the roots of biquadratic equations. These subjects are intimately connected with the article on Algebra in the first volume, and the whole ought to have been arranged together in a methodical manner.

4. *Geometry.* In this part, in the compass of less than a hundred pages are inserted the most useful propositions of Euclid's Elements of Geometry, interspersed with other useful matter.

We are strongly induced to believe, that an abridgment of this kind would be found more useful in our schools and universities, than the larger work of Euclid. For the scholar could find in it sufficient to qualify himself to enter upon the other branches of that science, without the trouble of learning several propositions of not much practical utility.

5. *Application of Algebra to Geometry.* This part contains a few examples, producing simple and quadratic equations. The subject is again taken up in the second volume under the title of "nature and properties of curves and the construction of equations," in which are given an abridged account of the properties of curves of the third and fourth orders, methods of finding the equation of a

curve or a curve surface from its genesis, and the construction and equations of a few of the most remarkable curves.

6. *Plane Trigonometry, &c.* contains the three fundamental canons, by which the different cases of plane trigonometry are solved in elementary treatises. The articles that follow, shew the application of those rules to the computation of heights and distances; mensuration of planes, solids, Artificer's works, and common surveying. Ninety-two pages of the first volume are appropriated to these subjects, which are explained in an ample manner.

7. *Conic Sections.* This is rather an abridged account, though the most useful properties of these curves are given—such as the general relations of the absciss and ordinate about *any* diameter, properties of the foci, drawing tangents, areas of the circumscribed parallelograms, asymtotes &c. The demonstrations of the ellipsis and hyperbola are arranged in exactly the same manner, which tends considerably to simplify the subject.

8. *Elements of Isoperimetry.* In this article the geometrical method of demonstration is used. The theorems are merely *elementary*, such as finding the greatest polygon, that can be made with sides given in number and magnitude, &c. None of those difficult problems, which have so much exercised the genius of mathematicians since the days of Newton, and which have tended so much to improve modern analysis, could be expected in a work of this nature.

The first volume closes with a collection of problems relative to the division of fields, the construction of geometrical problems, and questions in mensuration, which would have been more naturally connected with the similar articles, in the preceding part of the work.

9. *Plane Trigonometry considered Analytically.* This article is from the third volume of the English edition, and is one of the most important additions to the work. The whole theory of Plane Trigonometry is deduced from one fundamental equation, shewing the relation between the sides and the cosines of the angles at the base of the triangle. The algebraical symbols, by which this equation is expressed, tend very much to facilitate the computations made from it, on account of the great symmetry between the expressions of the sides and their opposite angles, which, though at first it might seem an object of very small importance, is *practi-*

cally very far from being so.* The equation thus found, combined with that well known property of a plane triangle, that the sum of the three angles is equal to two right angles, constitutes the basis of all the computations in this article, in which, besides the demonstrations of the three fundamental canons of trigonometry, are given various theorems for computing the sines, cosines and tangents, of the sums and differences of two given arcs, the resolution of *products* of sines and cosines of arcs to terms containing the *sums* and *differences*, the sines and cosines of multiple arcs, the sum of any series of sines or cosines of arcs in arithmetical progression, and the uses of these series in forming a table of natural sines, &c.

Among the problems given to illustrate the uses of these formulas, the sixth in vol. 2, page 23, deserves notice on account of the elegant solution by the American Editor. That which is given in the English edition is made to depend on a *cubic* equation, whereas by rejecting the common factors, which strike the eye at the first glance, it might be reduced to a *quadratic*. Notwithstanding this defect, the *author* speaks with great confidence of the neatness and brevity of his method, observing that any *direct* solution to this curious problem, except by the means he has used, "would be exceedingly operose and tedious," when in fact the *direct* mode, by other formulas, is by far less laborious, as the *American* editor has shown in his neat and simple solution, in vol. 2, page 25; where the problem is reduced to an equation of the first degree, instead of a *cubic*. This solution is partly geometrical, and perhaps the author of the work might object to it, on the ground that the whole article was designed to exhibit the *analytical* method of computation, and that it was not proper to introduce any facilities, arising wholly from the *geometrical* manner of treating the subject: this objection would be of some weight if the same simple result could

* The present method of notation (which Dr. Hutton has judiciously adopted) is to name the sides of the triangle by the small letters a, b, c, and the opposite angles respectively by the capital letters A, B, C; so that the angle A is opposite to the side a, B to b, C to c. Supposing therefore, c to be the base of the triangle, the two segments formed by a perpendicular let fall from the vertex on the base will be represented by $b.\cos A$, and $a.\cos B$, their sum gives the base $c = a.\cos B + b.\cos A$. By a simple change of the letters composing this equation into the terms corresponding to the base a or b, we may obtain similar expressions for a and b.

not be obtained by the direct analytical method in a simple and satisfactory manner.*

The investigation of the sums of *infinite* series of sines and cosines, whose arcs are in arithmetical progression (§ 34, page 16) is founded on the properties of *recurring* series; but the method of computing this kind of series is not taught in any part of the work, and the learner would be wholly at a loss how to proceed in the investigation, for want of the necessary explanations. It may be observed that the sums of such *infinite* series are *illusory* in the most simple cases when applied to numbers, as, for example, when the common difference of the arcs is commensurable with a semicircle.†

The theorem of § 36 page 17, that "the sum of the tangents of any three arcs, which together constitute a *circle*, multiplied by the square of the radius, is equal to the product of these tangents," may be extended so as to make the sum of the three arches equal to any *multiple* of the same ~~article~~ arch, and the demonstration, in this general state, may be rendered more simple than in § 36.‡ Even

* The question is to determine a plane triangle, having C = 2 A, $b=a+1$, $c=a+2$, the symbols being as in the preceding note. The sine of the first equation gives sine C = 2 sine A . cosine A, whence $\frac{\text{sine C}}{\text{sine A}} \left(=\frac{c}{a}\right) = 2 \cos A$. Substituting the value of 2 cos A (in § 6 of the article under review) it becomes $\frac{c}{a} = \frac{bb+cc-aa}{bc}$ Multiplying this by abc, transposing acc, dividing by $b-a$, and transposing aa gives $cc-aa=ab$. Substituting the preceding values of b and c, and dividing by $a+1$, gives $a=4$, whence $b=5$, $c=6$. Thus the solution is obtained analytically by an equation of the first degree.

† Thus if we put B = 180° in the equation § 26, page 17, the series will become sine A—sine A + sine A—sine A + &c. = ½ (~~sine A~~ sine A.) The first number cannot in general become equal to the second, because an even number of terms of the series is 0, and an uneven number is = sine A, neither of which agrees with the second member.

‡ The three arcs being A, B, C, and their sum being a multiple of 180° gives tang (A+B) = — tang C, substituting for tang (A+B) its value § 27 $= \frac{\text{tang A} + \text{tang B}}{1 - \text{tang A . tang B}}$ multiplying by the denominator and transposing tang C, it becomes tang A + tang B + tang C = tang A . tang B . tang C.

with this addition the theorem is but a simple case of a much more extended theorem on polygons, as has been shown in an English periodical publication of considerable merit.

The exponential expressions of the sine and cosine of an arch, which may be made so useful in most trigonometrical investigations, are not inserted in this work. They are, however, sufficiently elementary to have been admitted, and would have been a very useful addition.

10. *Spherical Trigonometry* is divided into two sections. The first treats of the general properties of spherical triangles, and, after the usual definitions, several elementary theorems are given on the limits of the sum of the three sides or angles of a spherical triangle, the formation of the supplementary triangle, the area of a spherical triangle, or of a polygon comprised by several arcs of a great circle, &c. Also, a short article on the nature of solid angles, taking for their measure the spherical surface included by the planes composing the angle, the angular point being the centre of the sphere: this has considerable analogy to the method of measuring plane angles, but the whole subject is rather curious than useful.

The second section treats of the "Resolution of spherical triangles." This is done by the algebraical method, in which the whole theory of Spherics is made to depend upon one fundamental equation,* from which are deduced in the usual manner, the most important theorems of Spherical Trigonometry. We were surprised, however, to find that the beautiful rules of Napier for the *circular parts*, were not inserted. The reason assigned for this omission is, that they are too artificial for a learner; but we are far from believing this opinion to be correct, and even if it were, the rules ought to have been given as a very useful aid to the memory of the proficient in spherics.

By comparing the investigations in this part of the work with demonstrations of the same theorems by the *geometrical* method, a fair estimate may be made of the advantages and defects of the *algebraical* manner of treating such elementary subjects. It will

* This equation in symbols, like those before used in plane trigonometry, is cosine a=cosine b . cosine c+sine b . sine c . cosine A. The demonstration is made by the elegant method adopted by La Grange, in his memoir on spherical triangles.

be perceived, that, if the only object was to demonstrate the common theorems of Right-angled spherics, there would be no advantage in using this analysis, since the object might be obtained geometrically, without greater labour, and in a way that would leave a much stronger impression on the mind. On the contrary, in the more complex theorems of Oblique spherics, (as for example, that for finding an angle from three given sides,) the algebraical method would be found decidedly superior by its perspicuity and brevity; and the same remark would apply to almost all cases of pure or mixed mathematics.

The superiority of the algebraical method in difficult problems, appears in a remarkable manner, in the investigations of the effects of the disturbing forces of the planets and satellites from their mutual attractions. The ancient geometry when applied to this abstruse subject, where great accuracy is required, appears divested of all its elegance and usefulness, and it would have been almost impossible to have attained to the present degree of perfection in the lunar theory, by following implicitly the steps of Newton in his Principia, without deviating from the geometrical method. This is fully evinced by the failure of Doctor Stewart, (one of the best geometers of modern days,) who in the computation of the motion of the moon's apsides and the distance of the sun from the earth, by the theory of gravity, has made many important mistakes, most of which have arisen from his bigoted partiality to the *geometrical* method of reasoning, which reduced him to the necessity of rejecting some small quantities, producing a very great effect on the last result. This is, perhaps, as remarkable an instance of the misapplication of the ancient geometry, as is to be found on record. The faults in this computation of the sun's distance, were pointed out by Mr. Dawson and Mr. Landen, but the author neither defended his work, nor had candour enough to acknowledge his mistakes. His biographer, Professor Playfair, admits that there were several small errors in the details of the calculation, but he endeavours to defend that part of the work, where by far the *greatest defect* exists, namely, in the relation of the disturbing force of the sun, and the motion of the moon's apsides. This part of the lunar theory was formerly a constant source of error to mathematicians. Newton made only a vague calculation on the subject. Those who first attempted it, in an accurate manner, were Clair-

ault, D'Alembert, and Euler, who, from neglecting some terms of the formula supposed to be very small, made the motion of the apsides but half what it was found to be by observation. Clairault was the first who discovered that the neglected terms were nearly equal to those they had before computed; and modern mathematicians, by continuing the approximation, have confirmed their results, and proved that theory and observation very nearly agree. The computation of Doctor Stewart, it is true, agrees very well with the observed motion of the moon's apsides, but *this is wholly accidental, and arises from a compensation of errors; the result would have been very different if the mean distance of the moon from the earth had varied considerably from its present value*, or if the calculation had been made to determine the motion of *any of the satellites* in the system, as for example, the fourth satellite of Jupiter, as it would be affected by the sun's disturbing force. This is by no means very difficult to prove, though Professor Playfair appears not to have been aware of the fact, since he compares Doctor Stewart's inaccurate calculation with those of the mathematicians already mentioned, and says that his method "is deserving of the greatest praise, since it resolves by geometry alone, a problem which has eluded the efforts of some of the greatest mathematicians, even when they availed themselves of the utmost resources of the integral calculus." The authority of Professor Playfair has given a considerable currency to this *erroneous* opinion. It has been copied into Hutton's Mathematical Dictionary, and into other European works of great merit—a striking instance of the influence of a man of talents in giving a wrong direction to the public mind, even upon a subject that admits of strict mathematical demonstration.

In the days of Newton, it was usual to demonstrate every problem geometrically. Algebra was used as an instrument to discover truth, Geometry to communicate and demonstrate it to the world. Many propositions of the "Principia" discovered by analysis, were demonstrated by the geometrical method. Perhaps it is owing, in some degree, to the example of Newton, that most British mathematicians have since had such a strong partiality for the ancient geometry. The effect of this has been (as some of the English mathematicians have admitted) to keep them in general far behind the mathematicians of the Continent of Europe, in the

investigations of the planetary motions, and in most of the various discoveries and improvements in modern analysis.

11. *Geodesic operations, and the figure of the earth.* This contains a brief account of the method of conducting large surveys, like that made a few years ago, for connecting the observatories of Greenwich and Paris. Several useful problems are given for reducing the observed angles and distances to the level of the sea, for estimating the horizontal refraction, for computing the triangles, &c. A demonstration is given of the beautiful theorem of Le Gendre, for reducing the calculation of spherical triangles whose sides are small, to the usual rules of plane triangles, which is done by subtracting one third of the excess of the sum of the three observed angles above 180° from each of those angles, and using the remainders as if the triangle were plane.

A formula is given for computing the ratio of the axes of the earth, from two measured arcs of the meridian, supposing the earth to be an ellipsoid of revolution. The results from comparing a few of the most accurate measurements are stated in a very abridged manner. Among them are observed the following, in vol. 2, page 93, "La Place from the Lunar motions finds the compression $\frac{1}{314}$. From the theory of gravity applied to the latest observations of Burg, Maskelyne, &c $\frac{1}{309 \cdot 5}$. From the variation of the pendulum in different latitudes $\frac{1}{335 \cdot 78}$." In these numbers there are some mistakes. The computation from the lunar equations by the theory of gravity, is given in vol. 3, page 282, of the Mecanique celeste, by which it appears that the lunar equation in longitude makes the compression $\frac{1}{305 \cdot 05}$, in latitude $\frac{1}{304 \cdot 6}$; neither of which agrees with $\frac{1}{314}$ or $\frac{1}{309 \cdot 5}$. The deduction from the variation of the pendulum, in vol. 2, page 150, is as above stated $\frac{1}{335 \cdot 78}$, but there is an error in La Place's computation in the 24th line of page 148, which being rectified, the result would become $\frac{1}{312}$.

Dr. Hutton observes in vol. 2, page 93, "that the computation from the phenomena of the equinoxes and the motion of the earth's axis gives for the *maximum limit* of compression $\frac{1}{304}$." This calculation made by La Place in vol. 2, page 353 of the Mecanique Celeste, is affected very much by the estimated mass of the moon, which was supposed to be $\frac{1}{58 \cdot 6}$, that of the earth being unity. A more thorough investigation of the subject, induced La Place to reduce it to $\frac{1}{69 \cdot 3}$, in page 159, vol. 3, of the same work.

Making this change in the formula, the maximum *limit* of the compression becomes $\frac{1}{287}$ instead of $\frac{1}{304}$. Dr. Hutton says the greatest number of observations make the compression but little different from $\frac{1}{301}$, which is probably not far from the truth. La Place uses that quantity in his lunar theory. La Lande in round numbers assumes $\frac{1}{300}$. Burg in his tables used $\frac{1}{330}$, but in Vince's edition, they are arranged for that, and for $\frac{1}{300}$, and this last value is used in the example for computing the moon's place.

12. *Principles of Polygnometry.* This article contains several curious theorems of Lexell, Lhuillier, &c. for computing from a definite number of sides and angles of a polygon, the remaining sides and angles. This subject has considerable analogy to the manner of finding the sides, angles, and area, of a plane triangle, by the common rules of trigonometry and mensuration.

13. *Of Motion, Forces, &c.* This treats of the general laws of motion in bodies (whether moving uniformly or equally accelerated) the composition of forces, equilibrium of forces acting on a point, the collision of bodies, the motion of projectiles in free space, the descent of bodies on inclined planes, and the motion of pendulums. None but the most simple cases are noted. The part relative to the composition of *forces* is quite defective, being considered by the author in the same manner as the composition of *velocities*. The investigation of the velocity acquired by falling by gravity through any curved surface is deficient, in not having proved that loss of velocity from the *change of direction*, while describing the curve, is insensible. No mention is made of several important principles in Mechanics, now so much used by mathematicians, particularly the principle of *virtual velocities*, *vis viva*, *conservation of areas*, *&c.* An abridged account of these, with a reference to works where a fuller explanation might be obtained would have been a valuable addition.

14. *Mechanical Powers, Statics, &c.* In these are explained the usual theorems relative to mechanical powers, the nature and method of calculating the centres of gravity, oscillation, percussion, gyration, the pressure of arches, the strength and stress of timber, &c.

15. *Hydrostatics, Pneumatics, &c.* The common elementary parts of these subjects are given, with the description and uses of several instruments, as the Barometer, Thermometer, Air-Pump, &c.

16. *Doctrine of Fluxions* contains an explanation of the principles of the calculus according to the Newtonian theory. The *direct* method, includes the usual rules for finding the fluxions of given expressions—the *inverse* is limited to some of the most simple forms. These rules are applied to questions of *maxima* and *minima;* tangents and quadratures of curves, surfaces and contents of solids of revolution; points of inflection and contrary flexure; radius of curvature; evolutes and involutes of curves, and the centres of gravity of bodies. Problems like these require nothing more than the elementary parts of the method of fluxions:—the higher branches are passed over without notice, as not coming within the author's plan.

In this article the principles and notation of Newton are fully adopted. All quantities are supposed to be generated by motion—which is natural enough when applied to geometrical figures, but seems wholly foreign to the computation of algebraical quantities. This objection would not apply to the principles of *Leibnitz*, who considered quantities as composed of an infinite number of small parts called *differentials*, and a curve as a polygon of an infinite number of sides, &c. This method has a decided superiority over that of Newton in the simplicity of application to the *higher orders* of differentials or fluxions, and it has been imputed in part to this, that the followers of Leibnitz have made so much greater improvements in the science than those of Newton. A pretty clear idea can be formed of first fluxions, but (although the principles are correct) it must be acknowledged that it is not so easy to conceive how a *first* fluxion, which has a certain definite value at a given point of a curve, can have in the first place a tendency to change by a quantity infinitely smaller of the *second* order, and *this* a tendency to change by a quantity infinitely smaller of the *third* order, and so on through an *infinite number of gradations*, each of which is supposed to be infinitely less than the preceding, and all *existing at the same moment in any particular point of the curve.* This difficulty is not so great in the method of Leibnitz. For the curve being considered as a polygon, the whole calculation is reduced to that of finding by the common principles of plane trigonometry, several consecutive sides and their *differences* of several orders, as if the quantities were finite.* But the question was frequently ask-

* These principles were adopted by the followers of Newton, in

ed, how an hypothesis that is evidently incorrect, (namely, that a curve is a polygon of an indefinite number of sides) could lead to a *perfectly correct* result. The answer of Leibnitz was, that by increasing the number of sides, the error might be decreased till it became less than any assignable magnitude; and that even in the ancient geometry, a demonstration carried on to that result was, in fact, always considered as perfectly satisfactory. To avoid these difficulties, Landen proposed a new method, called the Residual Analysis, published in 1758 and 1764, depending on the commonly received principles of Algebra, but this was not much used, on account of the tedious way of applying it to the solution of problems in which the fluxionary calculus has been usually employed. At length the true principles of this science were discovered by the illustrious La Grange, who published a memoir on the subject, in the collection of the Royal Academy of Arts and Sciences of Berlin, for 1772. This was followed by a paper by Arbogast, presented to the Royal Academy of Arts and Sciences of Paris, in 1789, an abridgment of which is given in his very original and excellent work, on the "Calcul des Derivations," published in 1800. Previous to that time, (about the year 1797,) La Grange had published his "Theorie des Fonctions Analytiques," containing a full development of his theory, in which he has demonstrated all the rules used in the method of fluxions, or the differential calculus, without having recourse to the idea of infinitely small quantities, limits or fluxions, and using exclusively the common principles of the algebraical analysis.* It is to be regretted, that La Grange

investigating the properties of the curve of swiftest descent, the solid of least resistance, &c.—and Newton, himself, in several instances, considered a curve to be a polygon of an infinite number of sides. The first, and very important proposition of the *principia*, where it is proved that the areas described by a body in its motion about a central point, are proportional to the times, is an instance of his using this method.

* To give an idea of this method, we shall take the example where a quantity y is supposed to be equal to a given function of the variable quantity x. Then when x is increased by the finite quantity e, y will become (by Taylor's theorem) $y = A + Be + \frac{1}{2}Ce^2 + \frac{1}{6}De^3 +$ &c. A being the value of the proposed function of x when $e = o$, and B, C, D, being functions of x *derived* from A, these derivations being similar to the *direct* method of fluxions of different orders.

has used a new *notation* essentially different from those of Newton and Leibnitz, from the fear that their symbols would have a tendency to recal to mind the inaccurate ideas of infinitely small quantities or fluxions. Fortunately none appear inclined to adopt this new notation; on the contrary, the symbols of Leibnitz appear to be getting more into use, and it is to be hoped they will ultimately prevail. They are used in by far the greatest number of valuable works, that have been published for the last fifty or sixty years. Newton's notation is hardly ever used, except by English mathematicians, and they do not all follow it implicitly, since Waring and others have for many years employed the sign of integration S of Leibnitz, instead of the F of Newton, and in some of the latest English publications (as in a memoir in the Philosophical Transactions for 1809,) the notation of Leibnitz is fully adopted. Newton's method is inferior to that of Leibnitz in respect to accuracy of printing, the fluxional *point* being much more liable to be misplaced or omitted, than the *letter* d. A proof of this may be found in vol. 2, page 70, of the work under review, in which page, the letters of reference occur above *one hundred times*, with but one mistake, (namely, the omission of letter *f*,) making the error less than *one hundreth* part of the number of terms, and the fluxionary point is marked *nine* and omitted *five* times,* the mistake being above *one third* part of the whole number. Hence the errors in this instance in the *letters* (in comparison of the whole number of terms,) is not *one thirtieth*

To find B from A being of the same import, as to find the *first* fluxion, and to find C similar to that of the *second* fluxion, &c. The *inverse* method consists in finding A from any one of the functions B, C, D, &c.—or B from C, D, &c. All these derivations are made according to the strict rules of quantities. It is then shewn how to apply these principles, in a very simple manner, to all cases in which the method of fluxions has been used. A treatise in our language, in which these principles were fully developed, would be a valuable acquisition to the public.

* As mistakes of this kind cause considerable embarrassment to the learner, great pains ought to be taken to correct such typographical errors in a future edition.

part so great as in the points. It is a circumstance in favor of the symbols of Leibnitz, that they have a very great analogy to the present method of denoting *finite differences and sums* by the Greek letters Δ and Σ, the *variations* by δ, and the *derivations* by D, the whole forming a more symmetrical and simple notation, than any that has been proposed.

17. The four next articles treat of several curious and useful problems, "concerning forces, with the relation between them and the time, velocity, and space described—Motion of bodies in fluids—Motion of machines and their maximum effects—Pressure of fluids against walls and fortifications—Theory of magazines," &c.

18. *Theory and practice of Gunnery.* In this article the resistance of the air, as deduced from a course of experiments made at Woolwich, is taken notice of, and several useful tables of resistances are given.

19. This contains the solutions of several curious problems in "Mechanics, Dynamics, Hydrostatics, Hydraulics, Projectiles," &c.—followed by a table of logarithms, from 1 to 9999, and of log. sines and tangents for every minute of the quadrant, to six places of decimals.

In this article, the *American* editor has very judiciously pointed out an error of Doctor Hutton, in the solution of a problem on variable pendulums, and has given a new solution founded on correct principles, in vol. 2, page 557. This problem had been partly solved by Bossut, in the Memoirs of the Academy of Arts and Sciences of Paris, for 1778, where the fluxional equations are given correctly; but some mistakes were made in the reductions, and the forms of the equations are not so simple as those of Professor Adrain, who has accurately found the fluents for the case, where the pendulum in its vibrations makes but a very small angle with the vertical.

Another additional article given by the *American* editor, in vol. 2, page 555, is a curious geometrical theorem for finding the angle contained by the chords of two sides of a spherical triangle with an elegant demonstration.

We have now finished our examination of this work, from

which it will appear, that the author has, in strict conformity with his plan, retained most of the elementary and useful branches of pure and mixed mathematics, and passed over slightly, or neglected wholly, the more abstruse parts. The selection of matter appears in general to have been made with considerable skill and judgment, though some subjects are omitted, of which an abridged account would have been useful. Several of these omissions have already been mentioned, and we may add to the list, Spherical Geometry, Dialing, Navigation, Astronomy, &c. There are yet some defects in the arrangement, arising from the articles published in the third volume of the English edition, though these defects, as they exist in that edition, have been considerably remedied in the present work, by several judicious alterations made by Professor Adrain, and we have it in our power to say, what can rarely be said of works of science republished in this country, that in general, the typography is equal, and the arrangement of the matter superior, to that of the English edition; and, on the whole, we can recommend this work as the most complete course of Practical Mathematics that has been published in this country.

ARTICLE 8.

The Poetical Works of Lord Byron. Philadelphia: Moses Thomas, 1813.

In this American edition, we are furnished with a complete collection of Lord Byron's Poems. The contents of the first volume, which are the miscellaneous poems, originally published under the name of *Hours of Idleness*, and the *English Bards and Scotch Reviewers*, especially the former, had no claim to republication from their intrinsic value. But since they were written, the author has raised himself by his subsequent productions from comparative insignificance as a poet to the very highest rank, and of course every thing he has produced becomes interesting. Whether the severe reception his Lordship's first essay met with stimulated him to exer-

tions, which occasioned this great improvement in his poetical powers, or whether it is only the natural progress of his mind in taste and judgment, it is not very material to inquire. In the former case he stands one of the most remarkable instances on record of the advantage of suitable correction according to the preacher's advice, without sparing the rod; and a living, complete refutation of all that he, and so many other enraged authors have written against the expediency and equity of reviewing.

Notwithstanding the inferiority in many respects of the early poems, it is easy to discern in them a portion of the same cast of thought, which is one of the most striking features in Childe Harold and the Giaour. Placed by fortune in what should seem one of the most enviable of human situations, the high, independent rank of a British peer, relieved from the continual intrusion of business that presses upon the majority of mankind; and endowed on the other hand with a brilliancy of genius, and a love of learning, that would seem to furnish him an inexhaustible resource against the attacks of that formidable enemy to the happiness of men of leisure, "the fiend Ennui," the sole but sufficient curse, inflicted in the order of things upon the privileged classes, in compensation for all they possess above the rest of mankind: thus placed by fortune and taste, on a high eminence, above the cares of life, the plague of business, and the torment of vacuity, such a man as Lord Byron would appear to be the very favored mortal that a modern Solon might have named as the happiest. Such is the theory—now look at the reality. This spoilt child of nature and fortune, in the very spring of youth, while his sources of pleasure might still be supposed to possess the bewitching graces of novelty, seems by his own shewing to have drained them all to the very dregs, to have exhausted the last drop in the cup of happiness, and to have felt the weariness of satiety, and disgust of life immoveably settled upon his mind, before the discretion of the law had invested him with all the prerogatives of his birth-right. We should hardly venture to say that these assertions are supported by the following piece,

which is one of the minor poems. It contains phrases that a man would not be very willing, in any case, to apply to himself.

DAMÆTAS.

In law an infant, and in years a boy,
In mind a slave to every vicious joy,
From every sense of shame and virtue wean'd,
In lies an adept, in deceit a fiend;
Vers'd in hypocrisy, while yet a child,
Fickle as wind, of inclinations wild;
Woman his dupe, his heedless friend a tool,
Old in the world, tho' scarcely broke from school;
Damætas ran through all the maze of sin,
And found the goal, when others just begin;
Ev'n still conflicting passions shake his soul,
And bid him drain the dregs of pleasure's bowl;
But, pall'd with vice, he breaks his former chain,
And, what was once his bliss, appears his bane.

The above however corresponds too well with the tenor of other passages, to leave much doubt who was intended by the portrait. The following is expressly descriptive of the author. In point of poetical merit it is far superior to any other piece in the first volume.

TO ——

Oh! had my fate been join'd with thine,
As once this pledge appear'd a token,
These follies had not, then, been mine,
For, then, my peace had not been broken.

To thee, these early faults I owe;
To thee, the wise and old reproving:
They know my sins, but do not know
'Twas thine to break the bonds of loving.

For, once, my soul, like thine, was pure,
And all its rising fires could smother;
But now, thy vows no more endure,
Bestow'd by thee upon another.

Perhaps, his peace I could destroy,
And spoil the blisses that await him;
Yet, let my rival smile in joy,
For thy dear sake, I cannot hate him.

Ah! since thy angel form is gone,
My heart no more can rest with any;
But what it sought in thee alone,
Attempts, alas! to find in many.

Then, fare thee well, deceitful maid,
'Twere vain and fruitless to regret thee;
Nor Hope, nor Memory yield their aid,
But Pride may teach me to forget thee.

Yet all this giddy waste of years,
This tiresome round of palling pleasures,
These varied loves, these matron's fears,
These thoughtless strains to passion's measures—

If thou wert mine, had all been hush'd;
This cheek, now pale from early riot,
With Passion's hectic ne'er had flush'd,
But bloom'd in calm domestic quiet.

Yes, once the rural scene was sweet,
For Nature seem'd to smile before thee;
And once my breast abhorr'd deceit,
For then it beat but to adore thee.

But, now, I seek for other joys,
To think would drive my soul to madness,
In thoughtless throngs, and empty noise,
I conquer half my bosom's sadness.

Yet, even in these, a thought will steal,
In spite of every vain endeavour;
And fiends might pity what I feel,
To know, that thou art lost forever.

In a moral point of view, such a display of character as these extracts afford is in the highest degree consolatory, since it gives another proof that happiness is entirely independent of external circumstances, and even of mental endowments. The inefficacy of mere outward accidents, as wealth, power, and fame,* to procure enjoyments is probably not much dis-

* The love of fame is styled by Milton, "The last infirmity of noble minds." This seems to be taken from the character of Helvidius Priscus, given by Tacitus. Hist. 4. sub. init. Erant, quibus famæ appetentior videbatur, quando sapientibus etiam cupido gloriæ novissima exuitur.

puted. It is even an obvious consideration, that a man has less chance for obtaining the comforts of life in proportion as he has a greater share of those things that are sought as their constituents. For as all superfluities become necessaries by habit, the number of wants, the difficulty of satisfying them, and the chance of casualties, are increased, and the likelihood of happiness is diminished in proportion. And though the possession of wealth and power soon ceases to afford any pleasure, the loss of them is ever sufficiently efficacious in creating pain. These distinctions, then, being at best not of a favorable kind, afford no rational ground for those who are deprived of them to complain of inequality and partiality in the arrangement of things in the world. But mental endowments are as much an accidental distinction, as wealth or power. If therefore they are essential to happiness, or even contribute to it very largely, by their own exclusive influence, those whom accident deprives of them, would have a right to complain of inequality. A man can no more provide himself with genius by his own act, than he can make himself what Plato thanked the gods for having made him—a man, and not a woman, a Greek, and not a barbarian, a freeman, and not a slave. Or supposing genius to be entirely acquired, the power of making the acquisition is the fruit of circumstances, and quite independent of the will. It is not in the power of a man to determine the time and place of his existence, in such a manner, that he shall be favored in youth with the instruction that creates or unfolds the powers of the mind, much less to place himself voluntarily among the few, favored with high original talents. Then in order to complete the equality in the disposition of good, it is necessary to shew that genius and knowledge do not of themselves confer happiness. Possibly this might be done by reasoning upon the nature of those qualities; but it is more suitable to our present occasion, to shew it by experiment: and the case of Lord Byron is directly in point. We find by his own repeated avowals, that his fine taste and imagination have been of no better service than his title and wealth, in saving him from the horrors of discontent

and mental misery. One example is certainly very far from establishing a principle: but we believe a recurrence to literary history would soon shew that his Lordship is not a solitary instance in support of our assertion. The latest reports on this subject, contained in Mr. D'Israeli's book of the Calamities of authors, we presume from the title, would be far from making against us. It will easily be understood, that by genius and knowledge we do not intend that practical wisdom which operates in controlling and regulating the affections, and which is undoubtedly the great instrument of virtue and happiness. But this has perhaps no nearer connexion with learning than with wealth. It is rather that good sense, which, though no science, is fairly worth the seven.

Experience then seems to show, that learning and genius, as well as other accidents, are not in themselves essential to happiness, though they may be instrumental in procuring it. There is another inquiry nearly connected with the above, on which we shall bestow a few words, viz. whether this knowledge, admitting it to be unnecessary for happiness, be a real ground of superiority: whether a man, having obtained a certain stock of knowledge, is to be considered, in quality of possessor of that knowledge, a greater man, than before he obtained it. The bearing of this inquiry on the other will be readily perceived. Superior rank as well as superior happiness breaks the equality in the disposition of good. We may perhaps throw some light on the subject, by taking a distinction between *knowledge*, which is the result of mental exertion, and mental exertion itself, which is the process for obtaining it. A little reflection seems to show that the actual possession of the knowledge, is not a rational ground of superiority.*

* "Our learning is so long in getting, and so very imperfect, that the greatest clerk knows not the thousandth part of what he is ignorant; and knows so uncertainly what he seems to know, and knows no otherwise than a fool or child, even what is told him, or what he guesses at, that except those things, which concern his duty, and which God hath revealed unto him, which also any woman knows as far as is necessary, the most learned man hath nothing to be proud of; unless this be a sufficient argument to exalt him that he uncertainly guesses at some more unnecessary things

Consider for a moment the small extent of this knowledge. Think how little one man can know of that small extent. To be perfect in any one branch or to make improvements in it, he must sacrifice to that alone the studies of his life, and relinquish all acquaintance with the remaining departments. By this exclusive study, the man at last becomes familiar with the doctrine of algebra, fluxions, and the integral and differential calculus—or he can discourse learnedly of attention, abstraction, imagination, and memory—or he has made himself master of the classification of plants, and will tell you of Polyandria and Syngenesia. Can we think that by these acquisitions the man has in reality made himself greater than his fellow creatures? He may indeed by such inquiries have exercised and improved his mental powers, and thereby become greater and better: but, observe, that in this case, it is not the result, but the process that has done him this service. It is not the possession of the knowledge that makes his superiority, but the exercise of mind he has taken in procuring it. Now this sort of superiority is not liable to the same objection as the other, because with respect to this mankind are on an equal footing. All are not indeed in a situation to exercise their minds in the acquisition of knowledge, but all are able to exercise the mind in some way or other. And who shall undertake to say that the quiet, secluded exertion of the mental powers, that produces theoretical knowledge, is more improving to them than the public efforts, that discharge the business of life.

We may take another view of this subject. If we have made a real advance in the scale of being, that advance must be permanent and remain in a future state. But the results of the exertion we make to acquire knowledge are in their nature temporary. The various languages, that we obtain by long and unwearied attention, will be hardly credentials of superiority in a state where we shall converse without the intervention of material organs. Even the most refined calculations of the mathematician will become gross, compared with beings of pure in-

than many others who yet know all that concerns them, and mind other things more necessary for the needs of life and commonwealths."

Taylor's Hol. Liv. chap. 2. § 4.

telligence. But we may well conceive that the vigor and activity, acquired by habitual exercise, may have some influence in qualifying the mind for the discharge of the duties, to which it may be destined in a future state of being. We may draw another proof of the insufficiency of knowledge as a ground of superiority, from considering how little difference there is in reality between the knowledge possessed on any subject, by a learned and an unlearned man. We suppose that astronomy is now brought nearer to perfection than any other science; and the difference between the quantity of astronomical knowledge, possessed by Laplace or Bowditch and a common man, appears immense. So we consider the diameter of the earth's orbit as immense. To us indeed it is so, for we can estimate it in numbers, but can by no means imagine it: yet to an observer in a fixed star, this immense distance is reduced to a mathematical point. There is no parallax of a fixed star. May we not suppose that this immense difference in astronomical knowledge would in like manner be reduced to nothing, compared with the complete and full understanding possessed by the maker of the solar system, of its motions and properties? This is founded on the idea, that intellectual as well as material greatness is only relative; while moral greatness, that is, goodness, is absolute. We might enlarge on this much farther, but as we have already wandered far enough from his Lordship, we shall merely remark, that what we have said, properly considered, has no tendency to undervalue the importance of knowledge, either in pursuit or in possession. On the contrary, by showing its real value, we hold out inducements to its cultivation. Knowledge may be divided into two portions, practical and theoretical. Much the larger share belongs to the last division, having no immediate relation to the business of life. And on any other ground, than the one we have taken, it will be found extremely difficult to defend the importance of this portion, which yet constitutes, in the general opinion, the noblest pursuit, that can occupy the mind, and certainly calls its powers into very vigorous exercise.

To accomplish the object of poetry, which is pleasure and

not instruction, it is necessary that the author, whatever be his bent of thought or his favorite studies, should possess a certain vivacity and brilliancy of genius, which shall give attraction to the subject, on which he chooses to exercise them. Without this, the truth of his facts, or the soundness of his philosophy, is of very little importance, for it is quite useless to criticise what will never be read. But assuming this *vivida vis animi* as necessary to poetical excellence of all kinds, it is evidently next in importance, that the taste and understanding of the poet should lead him to exercise it on high and important subjects, in the delineation of lofty characters, noble sentiments, deep and interesting philosophical truths. It is, we think, the union of these two qualities, that gives the poems of Lord Byron their high character. They display in the first place, the most exuberant richness of imagination, a fire of fancy that never fades for a moment, a conscious fullness that never wastes itself long upon one image, but urges you on continually with unabating vigor from one object to another. These qualities irresistibly engage the attention, and then to reward it, it is evident, that the author has exercised himself in profound contemplations on the highest subjects of morals, on the nature and destiny of man, and the workings of the passions and affections. He never amuses you with a superficial delineation of exteriors, but plunges into the recesses of the heart, and exposes the truth without disguise. We may take as an example his manner of treating the pride, pomp, and circumstance of glorious war. A poet, who loves to dwell on exteriors, delights in delineating martial scenes, dresses, and evolutions, and the shock of battles. Nothing indeed gives finer scope for a talent at brilliant description. Thus Mr. Scott has surpassed himself in his pictures of battles. That in Marmion is perhaps the masterpiece of his poetry. He gives way without hesitation to the vulgar enthusiasm excited by the splendor, noise, and bustle of this imposing scene. He becomes in a moment a common observer. With him we are carried away by the inspiration of the moment, and forgetting the real character of the sanguinary farce, we think that floating crests and serried spears are the

finest things in the world, and are ready to exclaim with the enraptured minstrel——

> To hero bound for battle strife,
> Or bard of martial lay,
> 'Twere worth ten years of peaceful life,
> One glance at their array.

Observe now in the following extract the manner in which Lord Byron expresses himself on military matters. He strips off at once the dazzling dress, with which the fatuity of men has invested them, and displays the cruelty and absurdity of war, in language uniting the strictest and most important truth with the highest strains of poetry. Whether this view of the subject is really holden by the author, or belongs to his fictitious personage, it is of not the least importance to inquire. It is sufficient that he has given a glowing and powerful representation of the real nature of that intolerable abuse of power and stigma on society, called war, which was generated in times of barbarian ignorance and feudal violence, and which is now kept up principally by habit, to amuse the gods of the earth, when they are tired of the important occupations of intriguing and gaming. When these domestic excitements have ceased to produce their effect, or when the mind is too noble originally to be touched by them, the usual resource is this game of lives. A subject is started, which it is not perhaps worth the turning of a cent to decide one way or the other—the possession of a waste of snows or a barren rock—Malta or Canada—the citizen is instructed that he has no right to inquire into the causes of the war or its consequences—there stands the man—it is his business to kill him—all that remains for him is the *obsequii gloria*, the praise of obedience—as if there were any duty half so clear as that a man has no right to take the life of another—as if the personal responsibility of the individuals or companies at the head of governments were a sufficient security for the lives and properties of their millions of subjects. The eloquence and force with which the author has expressed such ideas as these, are really inimitable.*

* The following fine satire on the folly of war, is from *Voltaire's Vision de Babouc.*—"Babouc monta sur son chameau, et partit avec ses serviteurs.

The stanzas have been often quoted, but too often they cannot be.

> Hark! heard you not those hoofs of dreadful note?
> Sounds not the clang of conflict on the heath?
> Saw ye not whom the reeking sabre smote;
> Nor sav'd your brethren ere they sank beneath
> Tyrants and tyrants' slaves?—the fires of death,
> The bale-fires flash on high:—from rock to rock

Au bout de quelques journées il rencontra vers les plaines de Sennaar l'armèe Persane qui allait combattre l'armèe Indienne. Il s'addressa d'abord à un soldat, qu' il trouva écarté. Il lui parla, et lui demanda, quel était le sujet de la guerre. Par tous les Dieux, dit le soldat, je n'en sais rien. Ce n'est pas mon affaire: mon métier est de tuer et d'être tué pour gagner ma vie: il n'importe qui je serve. Je pourrais bien même dès demain passer dans le camp des Indiens: car on dit qu'ils donnent pres d'une demi drachme de cuivre par jour à leur soldats de plus que nous n'en avons dans ce maudit service de Perse. Si vous voulez savoir pourquoi on se bat parler à mon capitaine.

Babouc ayant fait un petit present au soldat entra dans le camp. Il fit bientôt connaissance avec le capitaine et lui demanda le sujet de la guerre. Comment voulez vous que je le sache, dit le capitaine, et que m' importe ce beau sujet. J'habite à deux cens lieues de Persepolis, j'entends dire que la guerre a été déclarèe; j'abandonne aussitot, ma famille, et je vais chercher, selon ma coutume, la fortune ou la mort, attendu que je n'ai rien à faire. Mais vos camarades, dit Babouc, ne sont ils pas un peu plus instruits que vous? Non, dit l'officier, il n'y a guère que nos principaux satrapes, qui savent bien précisément, pourquoi on s'egorge.

Babouc étonné s'introduisit chez les généraux. Il entra dans leur familiarité. L'un d'eux lui dit enfin: La cause de cette guerre qui desole depuis vingt ans l'Asie vient originairement d'une querelle entre un eunuque d'une femme du grand roi de Perse et un commis du bureau du grand roi des Indes. Il s'agissoit d'un droit qui revenait à peu près la trentieme partie d'une darique. La prémier ministre des Indes et le notre soutinrent dignement les droits de leurs mâitres. La querelle s'echauffa. On mit de part et d'autre en campagne une armée d'un million de soldats. Il faut recruter cette armée tous les ans de plus de quatre cens mille hommes. Les meurtres, les incendies, les ruines, les devastations se multiplient: l'univers souffre: et l'acharnement continue. Notre premier ministre et celui des Indes protestent souvent qu'ils n'agissent que pour le bonheur du genre humain; et à chaque protestation il y a toujours quelques villes détruites et quelques provinces ravagées.

Sont ce là des hommes, s'écria Babouc, ou des bêtes féroces?"

Each volley tells that thousands cease to breathe,
Death rides upon the sulphury Siroc,
Red Battle stamps his foot, and nations feel the shock.

Lo! where the Giant on the mountain stands,
His blood-red tresses deep'ning in the sun,
With death shot glowing in his fiery hands,
And eye that scorcheth all it glares upon;
Restless it rolls, now fix'd, and now anon
Flashing afar,—and at his iron feet
Destruction cowers to mark what deeds are done;
For on this morn three potent nations meet,
To shed before his shrine the blood he deems most sweet.

By Heaven! it is a splendid sight to see
(For one who hath no friend, no brother there)
Their rival scarfs of mix'd embroidery,
Their various arms that glitter in the air!
What gallant war-hounds rouse them from their lair,
And gnash their fangs, loud yelling for the prey!
All join the chace, but few the triumph share;
The Grave shall bear the chiefest prize away,
And Havoc scarce for joy can number their array.

Three hosts combine to offer sacrifice;
Three tongues prefer strange orisons on high;
Three gaudy standards float the pale blue skies;
The shouts are France, Spain, Albion, Victory!
The foe, the victim, and the fond ally
That fights for all, but ever fights in vain,
Are met—as if at home they could not die—
To feed the crow on Talavera's plain,
And fertilize the field that each pretends to gain.

There shall they rot—Ambition's honour'd fools!
Yes, Honour decks the turf that wraps their clay!
Vain Sophistry! in these behold the tools,
The broken tools, that tyrants cast away
By myriads, when they dare to pave their way
With human hearts—to what?—a dream alone.
Can despots compass aught that hails their sway?
Or call with truth one span of earth their own,
Save that wherein at last they crumble bone by bone!

Oh, Albuera! glorious field of grief!
As o'er thy plain the pilgrim prick'd his steed,
Who could foresee thee in a space so brief,

A scene where mingling foes should boast and bleed!
Peace to the perish'd! may the warrior's meed
And tears of triumph their reward prolong?
Till others fall where other chieftains lead
Thy name shall circle round the gaping throng,
And shine in worthless lays, the theme of transient song!

Enough of Battle's minions! let them play
Their game of lives, and barter breath for fame:
Fame that will scarce reanimate their clay,
Though thousands fall to deck some single name.
In sooth 'twere sad to thwart their noble aim
Who strike, blest hirelings! for their country's good,
And die, that living might have prov'd her shame;
Perish'd perchance, in some domestic feud,
Or in a narrower sphere wild Rapine's path pursu'd.

The philosophy of Childe Harold is not so unexceptionable in every part, as where he touches upon war. It would be very easy to quarrel with him about his views of revealed religion. His reflections on the vanity of life that occupy the beginning of the second canto, are indeed profound and true, as are similar trains of thought in other parts of the poem. They are the effusions of reason, in the uncertainty of a future state, in which it is left by nature. They are predicated, not on the falsehood, but on the non-existence of religion. They are the thoughts that a contemplative mind in its moments of solitary musing must indulge in, putting aside all consideration of revealed truths. The author however, both in his own person and that of his hero, very often goes beyond this, and sneers at the idea of any religion, or any future state. The controversy with Atheism is too long to be taken up in this place. We may remark however, that the believer, while he enjoys the exquisite poetry of these passages, will congratulate himself upon the faith that saves him from sharing their uncomfortable gloom.

Thus far, though we have found something to disapprove as well as to approve, the nature of the doctrine inculcated has been rather obvious. There is one subject however in this poem, on which his Lordship's opinions are not so easily explained, and on which we have heard very discreet people ex-

press different opinions. We mean the nature of the author's sentiments of a tender kind. Here we find him contradicting himself at every step. He begins with describing himself as completely *blasé* to every feeling of affection; yet scarcely has he landed in Spain, before he launches out into a strain of elegant and high wrought flattery of an amiable person, named Florence, an inhabitant of the island of Calypso, and by the author's description, considerably like that ancient charmer. Not long after, his desponding fit returns upon him, and in explaining his conduct to an object called Inez, whom he certainly addresses in very equivocal language, if he was not in love with her, he reduces himself almost to the situation of the wandering Jew. In the beginning of the second canto, we have a fine ironical attack upon female coquetry, and another encomium on the modern Calypso, the whole implying him to be as much a sceptic as to the existence of benevolent affections, as of revealed religion—yet each canto concludes with a strain of the purest and apparently the truest sentiment of regret, for the loss of lover and friend. In the minor poems we find the same inconsistency. Here we have a gallant epistle to Florence, or an amorous address to Zoe, and again a strain of supreme indifference for all sorts of feeling, while the poems addressed to Thyrza contain the most exquisite expressions of regret and tenderness. All this we have no inclination to reconcile, and to those persons that confine their attention to what they read, without caring for the author, it is a matter of no great consequence. Some who love to see the man in his writings, will find a good deal of difficulty in making up their minds upon him amidst this chaos of opposite sentiments.

We have pointed out, as a characteristic of Lord Byron's style, his preference of the *morale* over the *physique*, his love of dwelling on the principles rather than the surfaces of things; it becomes us therefore to state that we do not give this as an exclusive quality of his style. On the contrary, his talent for striking description, when he indulges it, is equal or superior to that of those who have no other to boast. We may instance his description of Cintra, of the bull fight, of the interior of a

ship of war, of the court of Ali Pacha, and the nightly sports of his subjects, and above all his delightful stanzas on Greece. Still, however, the prevalence of the taste we first mentioned, gives a character to the poem, and justly so, inasmuch as the description of mind is more difficult and more noble than that of matter. But though confessedly more noble and more difficult, it would hardly have been supposed at first thought more popular. It should seem that this peculiarity of style, however it might have pleased those to whose habits of mind it might be more particularly accommodated, would not have contributed to extend the reputation of his Lordship among the mass of readers, who of course are not so much conversant with the tenets of philosophy, as the ordinary motives and varieties of action. The fact however appears to be otherwise. The success of these poems, if we may judge by the number of editions that have appeared, and the rapidity with which they have succeeded each other, has been almost unexampled. The world had just made up their minds to the belief that Scott acquired his astonishing popularity mainly by addressing himself to the common prejudices, common feelings, and common taste of the public at large; when now, to set all this at large again, comes a poet that spurns at every thing familiar and common, delights in repulsive characters and strange motives of action, insults the universal prejudices, national, popular, religious, and moral, of his readers, and yet, as it were in spite of themselves, pleases them as much as, if not more than the other. We shall not hazard any attempt to account for this paradox, but merely add, that the above remarks are more applicable to Childe Harold than to the Giaour, which by its wildness, its rapid, abrupt narration, and its resemblance to the Arabian Nights, is well enough adapted to what might be reasonably supposed the popular taste. We shall finish this article with a few remarks on this latter poem.

This poem, though written in the measure of Scott, has so little of his character in other respects, that it can by no means be called an imitation. It is not improbable however, that the author, seeing how many respectable poets had failed

in their attempts to manage this bow of Ulysses, was resolved to prove, that he at least was fully competent to the object. However that may be, the circumstance of a similar measure renders it easier to make the comparison between the two; and though comparisons are odious, and particularly so when both parties have so much merit, we should feel no hesitation in awarding the palm, in this instance, to Lord Byron. Scott's pictures are *aqua tinta* sketches, or rather the images that pass through a Camera. They have all the brightness and life of nature; they pass before you with enchanting rapidity, and the most agreeable variety; but they make no great impression on the memory. The works of the other are the dark, deep portraitures of the Italian masters. Every feature prints itself upon the memory, every emotion engraves itself in the heart. To compare writers in different styles of composition, is perhaps unfair, but after all, the comparison will be made. Who hesitates to say, that Raphael is a greater artist than Claude, though the former never painted a landscape, and the productions of the latter are like true representations of the very fields of Elysium?

> ——locos laetos et amoena vireta
> Fortunatorum nemorum, sedesque beatos.
> Largior hic campos aether et lumine vestit
> Purpureo: solemque suum sua sidera nôrunt.

The fact stated above, relating to the impression that the works of these two writers respectively make upon the memory, will of course be put to the test in a moment by the experience of every reader. As far as our own extends, we have found that not much of Scott is retained; the songs in the Lay and Marmion, the introductions and conclusions in the former, and the battle in the latter, are probably the most frequent exceptions: but by the time Childe Harold has lain upon your table a few weeks, you find yourself in possession of whole stanzas, whole pages, we had almost said the whole. As a specimen of their comparative powers, we submit their several descriptions of the same natural appearance, the rushing of a mighty river into the sea, which had before been touched on by one of our own poets.*

* See the Review of Rokeby in our last number.

The battle's rage
Was like the strife which currents wage,
Where Orinoco, in his pride,
Rolls to the main no tribute tide,
But 'gainst broad ocean urges far
A rival scene of roaring war;
While in ten thousand eddies driven,
The billows fling their foam to heaven,
And the pale pilot seeks in vain,
Where rolls the river, where the main. Rokeby, Cant. i. § 13.

As rolls the river into ocean
In sable torrent widely streaming;
As the sea-tide's opposing motion
In azure column proudly gleaming,
Beats back the current many a rood,
In curling foam and mingling flood;
While eddying whirl, and breaking wave,
Roused by the blast of winter rave;
Through sparkling spray in thundering clash,
The lightnings of the waters flash
In awful whiteness o'er the shore;
That shines and shakes beneath the roar;
Thus—as the stream and ocean greet,
With waves that madden as they meet—
Thus join the bands whom mutual wrong,
And fate and fury drive along.

The passage describing the desolation of Hassan's house after his death seems to be taken in its general ideas from the description in Isaiah of the desolation of Babylon; the same source from which Southey has drawn his ruins of Babylon in Thalaba, and Macpherson his Balclutha. We conclude by presenting to the reader the beautiful passage, amplified from a part of the song of Deborah, and applied to Hassan's mother.

"*The mother of Sisera looked out at a window, and cried through the lattice, Why is his chariot so long in coming? why tarry the wheels of his chariots? Her wise ladies answered her, yea, she returned answer to herself. Have they not sped? have they not divided the prey; to every man a damsel or two; to Sisera a prey of divers colours, a prey of divers colours of needlework on both sides, meet for the necks of them that take the spoil?*" Judges v. 28, 29, 30.

His mother looked from her lattice high,
With throbbing breast and eager eye—
"'Tis twilight—sure his train is nigh,"—
She could not rest in the garden-bower,
But gazed through the grate of his steepest tower—
"Why comes he not? his steeds are fleet,
"Nor shrink they from the summer heat;
"Why sends not the Bridegroom his promised gift,
"Is his heart more cold, or his barbs less swift?
"Oh, false reproach! yon Tartar now
"Has gained our nearest mountain's brow,
"And warily the steeps descends,
"And now within the valley wends;
"And he bears the gift at his saddle bow—
"How could I deem his courser slow?
"Right well my largess shall repay
"His welcome speed, and weary way."—

ARTICLE 9.

The Grounds of Christianity examined, by comparing the New Testament with the Old. By George Bethune English, A.M. Boston, 1813.

Review of a book, entitled, "The grounds of Christianity examined, by comparing the New Testament with the Old. By George Bethune English, A.M." By Samuel Cary, one of the ministers of the Chapel, Boston. Boston, Isaiah Thomas jun. 1813.

Two sermons on infidelity, delivered October 24, 1813. *By William Ellery Channing, minister of the church in Federal Street, Boston.* Cambridge, Hilliard & Metcalf, 1813.

A Letter to the Reverend Mr. Cary, containing remarks upon his review of the Grounds of Christianity examined. By the Author of that Work—and, A letter respectfully addressed to the Reverend Mr. Channing, relative to his two Sermons on Infidelity. By George Bethune English. Boston, 1813. 12mo. pp. 133 and 41.

THE publications of Mr. English are attacks on Christianity. They are entitled, we believe, to the bad distinction of being the first original works of this character, ever published in

New England. We doubt however, whether they are greatly to be regretted, except as it respects their author. We are not insensible to the mischief which is done by infidel writings; but we believe that this mischief is often attended and counterbalanced by the production of much good. Such writings have been in a great degree the cause of the evidences of Christianity being, in our day, so well understood, and of their having been stated with the force of moral demonstration. The controversy being publickly carried on, the solutions and answers may be known to all, as well as the objections and difficulties. The latter are often such as lie on the surface, and might be likely to occur to thinking men, who, as learning no less than good sense is sometimes necessary to their removal, might not always of themselves discern how they were to be obviated. The objection, which might have been perceived undefined and indistinct, is now exhibited to view, clearly brought out, and we are at the same time shewn that it is only, if we may so speak, an ocular deception; that it has no real existence; and that the appearance is occasioned by the false and imperfect light, under which we have viewed the subject. Upon the evidences of Christianity, as they have been stated by those who have written on the subject, especially by Dr. Paley, we think the mind may now rest with a feeling of perfect security. Now believing, as we do, that where there is any doubt respecting the truth of Christianity, it is of immense importance to the individual, that these doubts should be removed, we cannot think that infidel writings are merely a subject of regret, if it be true, that we are, in some degree, indirectly indebted to them for the means of this removal.

Another advantage of such writings is, that they excite interest and attention to the subject of religion. There are too many, who do not feel how inestimable the value of Christianity is to individuals and to society, till they are roused to some alarm and to some anxiety, by an attack on the foundations of their faith. They have a regard for the religion in which they have been educated, but they have not paid a proper attention to its character, its effects, or perhaps to its evidences. But

now their thoughts will be directed to these subjects by an immediate excitement; and the consequence will be, that they will continue Christians, with more strength of conviction, with more ardor of feeling, and with a deeper sense of the blessing of their faith.

To infidel writers we are likewise in a great degree indebted for the clearing away of all which human folly and superstition have connected with Christianity. It cannot be too often repeated, that it is these which infidelity usually delights to assail. The efforts of the enemies of Christianity have not unfrequently contributed to the destruction of what its most sincere and intelligent friends are laboring to remove. The religion of God cannot be shaken; but what is of human erection, may be overturned by human means. The foundation, which no man has laid, cannot be removed by man; but the wood, and the hay, and the stubble, which have been built upon it, have very often blazed in the contest with the assailants. We expect some advantages of this kind from the publications of Mr. English.

We fear however, that by our introductory remarks, we are giving the impression, that we attribute an importance to these publications, to which we do not think them entitled. Of their importance however, Mr. English seems himself to have a most unreasonable opinion. Having very faithfully (as there can be no doubt) read the whole works of Collins, which relate to the subject of which he treats; and David Levi's Letters to Dr. Priestley; and looked into Wagenseil's Tela Ignea; and made himself master of Evanson on the Dissonances, and become acquainted with Brown's History of the shakers; he came forth, thoroughly versed in what he entitles the Jewish controversy. An entire revolution took place in his faith. Having not long before descended from the dark and dreary regions of scepticism, he had now passed his perihelion, and was returning thither again with astonishing velocity. His own opinions were wholly changed; and unfortunately, without waiting for the period of another revolution, he thought it necessary immediately to announce the fact to the

world. In Wagenseil's Tela Ignea, he had accidentally opened upon a view of knowledge, from the use and advantages of which by far the greater part of mankind had been till his time defrauded; and it was natural to be in haste to communicate his discovery. Mr. English is one of that unfortunate class of men, who are continually subjecting themselves to ridicule, by the mistake of supposing, that what is new to them, is new to the whole world; all whose advances in learning are attended with the most surprising discoveries; and who, on a road where a common traveller passes without seeing any thing very remarkable, are continually mistaking and magnifying the character of common objects, and shrewdly suspecting the windmills to be giants. The state of Mr. English's mind is discovered not merely by his style of writing, and his assertions concerning the rarities to be found in his book, but still more by the facts of his having transcribed a very considerable part of it from Collins and Evanson, without acknowledgment. Nobody, we think, would have done this, who did not believe, that all the rest of the world except himself lay in such a state of ignorance, that he might practise this imposition, without fear at least of immediate detection.

Mr. English's mind is distinguished by some remarkable deficiences. He has no power of seeing more than one object at a time—of contemplating a subject under more than one point of view—of feeling the force of more than one argument. He has of course no ability to compare arguments together, and is wholly wanting in judgment. He is carried away at the mercy of every new opinion which happens to strike his mind; and as he sees nothing but those considerations which prevail, each new opinion, however inconsistent with his former ones, or however wild and ridiculous in itself, will be embraced with the strongest conviction, and the most perfect feeling of satisfaction in its truth. Thus obtaining a full assurance in notions very different from such as are held by others, it is quite natural for him to conclude that this is owing, not to any unhappy defect of mind, and a want of those powers of comprehending a subject which others enjoy, but, on the contrary,

to some peculiar superiority; not to having seen less, but to having seen more; and thence to infer the propriety of giving instruction to those about him; of condescending to their weakness, and endeavouring to remove their ignorance. If it were not rather too vexatious and on far too solemn a subject, it would be somewhat amusing to remark the seriousness with which all this is done, the gravity with which he announces his nothings, the positiveness with which he is wrong, and the utter want of any feeling of the absurd or the ridiculous which he discovers. His confidence of style and manner is however adapted to affect those readers, who are not well informed on the subjects of which he treats. Pretension always passes for something, till we discover that it is unfounded. From the state of his mind, Mr. English is liable to be strongly affected by weak arguments, and to express his convictions very strongly. But where conviction is expressed with great force, it is natural enough to conclude, that there is something in the considerations by which it is produced. It is not every one who, in seeing the unnatural strength which is the effect of slight causes, operating upon morbid debility, can distinguish it from the habitual vigor of health.

There is still another defect in Mr. English's mind, nearly connected with the preceding, and which is quite as much discovered in his book. His perceptions are extremely hasty, confused, and inaccurate. In reporting the opinions, or making statements, it is more probable than not, that he will commit some mistake. His book is full of errors of the grossest kind. He appears to perceive in reading, not what is actually before him, but what he fancies ought to be; and always to leave a book, satisfied that he has found what he wished to find there. We have no doubt, that with regard to some of the most extraordinary of his misstatements, one might go over the subject with him several times, and explain it to him step by step, before he would be convinced of his error.

But how, it may be asked, with all these mental deficiences, has Mr. English written a book of any plausibility? One answer is, that Mr. English is no more accountable for the argu-

ments of a great part of his book, than he is for the opinions advanced in this review. They are copied from other writers. And a further answer is, that there are cases in which a man will argue plausibly, just in proportion to his want of comprehension of his subject. Every astronomer knows, that the truth of the Newtonian theory of the motions of the heavenly bodies is supported by demonstration; but we can easily conceive how one that did not understand the subject, might talk upon it, and start objections, and how forcible some of these might appear to those who were as ignorant as himself. The confidence of his assertions, and the readiness of his wit, would be just in proportion to his want of all qualifications to discuss the question. A similar case to what we have supposed has actually taken place. Every body has heard of M. de St. Pierre's new theories about the figure of the earth and the causes of the tides, and how much he has written on these subjects. Now we have no doubt, that there are those to whom what he has written has appeared to have much weight; that he has had his followers; and that he would have had a vast many more, if men's fears or their vices had had any influence to make them adopt his opinions.

We may observe likewise, that while we think Mr. English little less absurd upon the subject of religion than M. de St. Pierre is upon those of science—we think likewise, that a comparison between them may be carried still farther; and that Mr. English resembles that writer in possessing, in a considerable degree, some of the qualities which go to constitute genius. He has a more than common share of imagination, strength of conception, undisciplined warmth of feeling, and force, though coarseness, of language. These qualities not only exist with the defects before mentioned, but are probably in a considerable degree their cause. When one's judgment is weak, and his imagination and feelings strong, the former, we know, is continually deceived and abused by the latter. As we are not willing to give up the hope of Mr. English's return to usefulness, and should be very sorry to do any thing to prevent it, we will further say, that though we regard the

defects of his mind as great, we do not consider them as irremediable. We think that much might be done for their correction, by cultivating the habit of slow and patient attention, by carefully avoiding to yield to all first impressions, and by constraining himself, when forcibly struck with an argument, still to keep his mind in a state of doubt and deliberation.

The publication of an infidel work in New England, where the evidences and the character of Christianity may be so well understood, and this too, by one who had himself just been a preacher of our religion, is a very singular event, of which one may reasonably be curious to know the causes. We have given what we conceive to be the true explanation of the fact. We should not, however, be thus general in our remarks, but should think it proper to observe particularly upon the different parts of Mr. English's work, if this had not already been partly done by Mr. Cary, and if we did not expect a full answer to all that is worth notice in his book, from a gentleman who is every way qualified for the undertaking. We will however point out one error of Mr. English, as we feel ourselves in some degree particularly concerned in it. He says,

"With regard to the *internal evidence* for the authenticity of the writings composing the New Testament, it is *still less satisfactory* than the external evidence.—And this may be well believed, when the reader is informed that the great *Semler*, after spending his life in the study of Ecclesiastical History, and antiquities, which he is allowed to have understood better than any before him, affirmed to his astonished coreligionists, that, except the Gospel of John, and the Apocalypse, the whole New Testament was a collection of *forgeries* written by the partizans of the Jewish and Gentile parties in the Christian Church, and entitled *apostolic*, in order the better to answer their purpose." pp. 137, 138.

Now we have no doubt, that the contemporaries of Semler would have been very much astonished by this account of his opinions; but their astonishment would have been exceeded by that of Semler himself. The statement of Mr. English is without foundation; and is a specimen of the sort of errors to be found in his book. It is particularly unfortunate, not only as Semler did not deny the genuineness of those books of the New Testament, which have been universally received;

but did question the genuineness of the Apocalypse, which Mr. English represents him as having maintained. "Concerning no book of the New Testament," says the writer of his life, "did Semler proceed so unfairly as the Apocalypse, since he hastily adopted the opinion, that it was the work of a visionary, for the advancing of fanatical notions respecting the Messiah."* See also Semler's *Institutio ad doctrinam Christianam liberaliter discendam* pp. 153, 154. In the latter work, Semler makes the following remark, in speaking of those spurious gospels, epistles, &c. which Mr. English thinks of so much consequence: "But this also we understand, that prior to these there were true Gospels, Acts, and Epistles, after the likeness of which those writings were forged."†

Mr. English's misrepresentations we attribute to the confusion and inaccuracy of his mind. We suppose he may say with Cassio, "*I remember a mass of things, but nothing distinctly.*" Others less charitable, and who attend less to the sort of character discovered in his book, will unjustly, we think, consider them as wilful misstatements; such as no man could make unless he made them intentionally.

With the views which we have of the defects of Mr. English's mind, we think very differently from what we should otherwise do, of the moral turpitude, of publishing such a book as he has done. It is indeed utterly incredible, that a man of good sense and clear understanding, should, in less than a year after he had been a preacher of Christianity, not only entirely change his belief respecting its truth; but entirely change his opinions and feelings, respecting its character and doctrines; and write and publish a book to announce his changes to the world. If therefore we believed Mr. English to be a man of good sense and clear understanding, which we are very far from doing, there would be no other alternative in our minds, but to regard him either as a hypocrite in his faith, or as something worse than a hypocrite in his infidelity. We have no doubt that he is sincere in the one, and was sincere in the other; and with his sort of mind, if he were to happen to get engaged in the history of Mahomet, we should be not at

* Repository, vol. ii. pp. 38, 39. † p. 148.

all surprised, if he were to suffer a new change, as extraordinary as any that have preceded.

The account which Mr. English gives of those reasons for publishing his book, that overcame his reluctance, is as follows.

"I protest before God, that from the apprehension above mentioned alone, I would have confined the contents of this volume to myself, did I not feel compelled to justify myself for having quitted a profession; and did I not, *above all*, think it *my duty*, to make a well meant attempt, which I hope will be seconded, to vindicate the unbelief of an unfortunate nation, who, *on that account*, have for almost eighteen hundred years, been made the victims of rancorous prejudice, the most infernal cruelties, and the most atrocious wickedness. If the Christian religion be, *in truth*, not well founded, surely it is the duty of every honest, and every humane man, to endeavour to dispel an illusion, which certainly has been, notwithstanding any thing that can be said to the contrary, the *bona fide*, and real cause of unspeakable misery, and of repeated and remorseless plunderings, and massacres, to an unhappy people; the journal of whose sufferings, *on account of it*, forms the blackest page in the history of the human race, and the most detestable one in the history of human superstition." pp. 66, 67.

Mr. English's principal motive then in publishing his book was to vindicate the Jews, and deliver them from persecution. After the very solemn manner in which he has affirmed this, we have no right to doubt that he *believed* it to be the truth. Considering however the state of the world, and especially of that part of the world to which we suppose the circulation of Mr. English's book will be principally confined, we regard his account of his motives as one of the most remarkable proofs of the truth of a fact, pretty well understood by observers of human nature, that there is no person upon whom a man may practise such gross imposition as upon himself. If Mr. English had thought nothing of the wonder and consternation he was about to excite, by communicating his great discoveries, we are very fearful the poor Jews would have wanted their defender.

There is one consideration, among many others, that is worth attention in reading the works of infidel writers, which is, that they start objections and difficulties, but no one has ever attempted to give even a plausible theory to account for the

existence of Christianity, and of all those facts connected with it, upon the supposition of its having a merely human origin. Certain moral phenomena of a very extraordinary character have taken place in the world; and of these, if one reject the causes assigned by a Christian, it is necessary to give some plausible solution. It is necessary to account for the great moral and intellectual change which appeared in a large body of men. It is necessary to account for the existence of various books, agreeing together in every essential particular, and containing the history of a man whose recorded actions are a succession of miracles. It is necessary to account for another book of a similar kind, containing a part of the history of his followers; and for writings claiming to be their epistles—for the forgery of which it would not be easy to assign a probable inducement. Some solution must be given of the coincidences between these epistles and the history last mentioned—coincidences which it seems morally impossible should have been the result of imposture. Some theory must be found to explain, where the rude and unlettered writers of the life of Jesus of Nazareth acquired the wonderful conception of moral sublimity and perfect virtue which they have exhibited in his character; how it was that they executed productions, which, if they be works of art, are, as containing the display of such a character, far more wonderful than the masterpieces of painting or statuary, or any other productions of human genius. We must be told how it was that this man collected his followers; how it came to pass that there was so much persuasion and allurement in the words, "If any man will come after me, let him deny himself, and take up his cross and follow me.—They will deliver you up to the councils; they will scourge you in their synagogues, and the brother shall deliver up the brother to death, and the father the child.—Ye shall be hated of all men for my name's sake.—He that killeth you shall think he doeth God service." It must be explained how he collected followers in a manner so extraordinary. It must be shown under the operation of what causes it was, that these followers, appalled, distressed, scattered, in consternation at the apprehension of their master, terrified even to his denial, and all their hopes

overwhelmed by his death, but a few days after appeared again in the city of his murderers to proclaim—"Ye have taken and by cruel hands have crucified and slain him—but God has raised him up, having loosed the pains of death—This Jesus has God raised up, whereof we all are witnesses.—Whether it be right in the sight of God to hearken unto you more than unto God, judge ye: for we cannot but speak the things which we have seen and heard." Some account must be given of the peculiar and distinctive character of the religious and moral precepts of the first teachers of Christianity. We cannot stop to comment upon the misrepresentations of Mr. English respecting this subject, by which no mere folly can be deceived; but we must be informed in what manner the son of a carpenter, and the fishermen of Galilee, learnt notions of duty and ideas of virtue, of which the world afforded in practice nothing like an example; how it was that they acquired principles of action, a freedom from selfishness, a universal, active, and unremitting benevolence—such as had never been dreamed of by philosophy; how it happened that these poor, ignorant men, who were either deceiving or deceived, inculcated motives and hopes, whose reception and belief in every subsequent age have been the foundation of all that is most holy, and pure, and exalted in human virtue. Some theory must be given to account for the fact, that impostors or fanatics, call them which you will, spent their lives in going about for a most extraordinary purpose—to preach truth and soberness; to teach a world that lay in wickedness to repent and to be changed; to reason of righteousness, temperance, and judgment to come; to convert idolaters to the worship of God; and to bring men, on whom a belief of a future state never had had the most inconsiderable influence, to regulate their lives by a regard to that day in which God will render to every man according to his works. We want some explanation of the causes by which so many persons were at the same time struck with an insane love of toil, and wretchedness, and want, and contempt, and danger, and death; and found their happiness in being of all men most miserable;—how it came to pass that they submitted to this for the sake of mocking God and deceiving man. And when some theory is

formed that will embrace a solution of all these facts, and very many others that we might mention, we have still a farther demand to make, before we can think it necessary to examine anew the foundations of our belief. We look upon the state of the world at the time of the introduction of Christianity; and we see almost nothing but profligacy, corruption, injustice, and cruelty; we see every thing in the habits and dispositions of men which was most opposed to the reception and prevalence of Christianity; we then regard the condition of the Jewish nation; we remark how they were considered by the rest of mankind; we know what they were, the most despised portion of the slaves of the Roman Empire, *despectissima pars servientium;* we know in what contempt Nazareth and Galilee were held by this nation, itself so despised; and if we had no historical evidence, we might easily conceive how the son of a carpenter, and fishermen, and publicans would be looked down upon by its Rulers and Pharisees; and we see a religion, having its origin in Nazareth and Galilee, with such men for its authors, coming forth from this despised nation, to effect in myriads of men the most difficult of all changes, a change of moral habits; to receive the homage of rank, and learning, and philosophy; and in less than three centuries, the submission of the whole power of the Roman Empire. We see it rushing forth, and overwhelming the temples of the gods, and sweeping away their images, and burying beneath it the schools of philosophy, till itself was mingled and polluted with the corruptions it had overthrown—and we are called upon to believe that all opposition was overcome, all hostility vanquished, and all this immense change produced—not by force, for that is out of the question, but merely by some strange union of artifice and folly. We trace the moral effects of this religion; we see the vast influence which it has had to alter and improve the state of civilized society in those countries where its power is most felt; we see that it has elevated man to be a being of another order; that it has given the ascendency to all that is moral and intellectual in his nature; that it has taught him to regard himself not as a mere creature of this world, but as the child of eternity; that in his severest temptations it gives to

him his strength; that in his deepest and bitterest sorrows it is often his only consoler; that it connects him by the strongest sympathies with his fellow creatures; that it unites him by the holiest affections to his God. We turn again to infidelity, and ask the original causes of all these wonderful moral phenomena; and the only answer she can give is, that they are the result of human artifice and folly. When she attempts to explain particularly the manner in which these operated, her causes are the most inadequate, improbable, and inconsistent. We cannot assign the astonishing effects which have been produced, to such agents as she must suppose. We could almost as soon believe, that it is not the power of God which is wheeling the earth through its orbit, but that the motion was originally communicated by the lever of Archimedes.

Respecting the objections to Christianity, we may observe, that the direct answer to any one of them is by no means all that is opposed to it in the mind of a well-informed Christian. From various sources, from studies of a very different character, and from a contemplation of the proofs of our religion under very different points of view, there is in his mind an accumulation of evidences in its support, mutually strengthening each other. The general heads of these evidences may be stated very forcibly and satisfactorily, and may be found in single treatises on the subject, very sufficient to remove all uncertainty; unless one indulge in the study of those objections, for whose solution he is not qualified by any preparatory learning. But however satisfied one may be by the reading of such works, however satisfied he may feel himself with the answers to particular objections, it is difficult for him to conceive how trifling all that is brought against Christianity appears to one, in whose mind the system of its evidences has been slowly erected by the study of years. If we suppose a man charged with being an impostor or fanatic, we may by an examination of the evidences to his character, and of the grounds of this particular accusation, be satisfied of its injustice and untruth. But if we have known him intimately, and known him long, and have every day percieved the marks of probity and good sense, we reject the charge at once; we may be anxious to vindicate his

character, and therefore ready to trace and explain the causes of its origin, but this will not be for our own satisfaction respecting its truth.

Our remarks upon Mr. English we think have not been of a character to excite against him any anger or resentment. We should regret it much if this were the case. He will not thank us for it, but we feel for him the most sincere compassion. It is really a melancholy subject of consideration, to think of a young man, with, we believe, many estimable qualities, in the very commencement of life, destroying his own reputation, blasting his prospects, putting an end to his usefulness, cutting himself off from the society of the wise and good, and while he is rushing upon misfortune, casting away at the same time the hopes and consolations by which misfortune can be supported. We sincerely desire that he may at some time return to that religion, which is ever ready to receive the repentant; and find in her promises that peace, which, we fear, he will not elsewhere find.

The work of Mr. Cary is an answer to a part of that of Mr. English. It is written with much good sense, and with much force and perspicuity of argument. The rational Christian will be gratified with the manliness with which the author avows his opinions, and with the correctness of his views on the subject in question. There are some oversights, which are to be attributed to the haste with which the book was composed: it having been begun and completed, as its author informs us, within the space of four weeks.

Mr. Channing's sermons are such as might be expected from one of the most eloquent and rational preachers, who have ever given their talents to the cause of religion and virtue.

As we have already mentioned, we expect a more complete answer to Mr. English's book than has yet appeared, from a gentleman, whom we are gratified to speak of as one of our number.

ARTICLE 10.

A dissertation on the supposed change in the temperature of winter, read before the Connecticut Academy of Arts and Sciences 1799, *and published in the first volume of the Memoirs of the said Academy. By Noah Webster, jun. Esq.* pp. 68.

THIS is a very ample and elaborate discussion of the question relating to an amelioration of climate in northern latitudes. Mr. Webster maintains, in opposition to Hume, Gibbon, Buffon, and others, and contrary to the common opinion, that no change has taken place in the temperature of winter; that this season formerly, though sometimes severe, and marked by deep snows and hard frosts, as it is now once or twice in a century, was ordinarily as mild as it is at the present day. The idea of a mitigation of winter, he thinks, has arisen from mistaking accounts of such, as were remarkably cold, for a representation of the general temperature of the season. The expressions, that occur so frequently in ancient authors, descriptive of severe cold, he thinks, relate either to the mountainous regions, which are still covered with snow every year, or to winters of uncommon severity, which were more likely to be noticed; or they are the bold and exaggerated language of poets. He contends also, that as the distance of the sun, and the obliquity of the earth's axis remain without any material change, it is unphilosophical to suppose any essential alteration of the seasons.* But his chief argument is drawn from the vegetable kingdom. The fig, the olive, and other delicate fruit trees, he considers as a sort of natural thermometers, that afford the most certain information in this case. As these trees flourished and matured their fruit in the same regions in ancient times, in which they are now cultivated, and as they have not migrated to the northward, and cannot be brought to perfection in more northern climates, it amounts to a demonstration in his opinion, that the winters in those places are not milder now, than they were formerly.

After showing by quotations from Pliny, Strabo, and oth-

ers, that a species of the vine was cultivated in the south of France in the time of Pliny, and that the fig and the olive were cultivated as far north as the foot of the Cevennes, he says,

"It is remarkable that the limits of the olive region, here designated, are precisely those to which that tree is now confined. The line, beyond which olives will not produce fruit, as marked by Arthur Young, begins at the foot of the Pyrenees, in Rousillon, in the 42d degree of latitude, thence runs northeast, through Languedoc, to the southward of the Cevennes, crosses the Rhone at Montelimart, and pursues its direction, near Grenoble, towards Savoy, where it terminates. This district then includes part of Rousillon, part of Languedoc, most of Dauphiny, and all Provence. Olives grow and mature there precisely within the limits, marked by Strabo and Pliny, and as far as we can judge, not a league further north than they did eighteen hundred years ago.

I am willing to rest the whole argument on this fact. It is possible that the clearing and cultivation of particular places, by removing moisture, may enable the moderns to raise particular plants, as the vine, for example, in those places, where the ancients could not. But I do not find, in history, any evidence that a change of climate generally has carried any of the delicate fruits into latitudes where they did not thrive in the earliest ages. If any climate has become warmer by seventeen degrees, it would admit plants to be removed northward about ten degrees of latitude. For instance, the mean temperature of South Carolina is 66° by Fahrenheit; that in Connecticut, is about 49°, precisely the difference supposed by Dr. Williams to have taken place in the climate of Italy. The difference between the latitudes of Carolina and Connecticut is about 10 degrees. Ten degrees of latitude then give 17 degrees difference of temperature. If then olives grew in the south of France, eighteen centuries ago, and the climate has become warmer by 17 degrees, olives may have the same temperature now in 53° of latitude, that they formerly had in 43°. Of course they would thrive in Westphalia, Saxony, and Prussia. Instead of which that tree is limited to Dauphiny and Languedoc, as it was at the Christian era." pp. 23, 24.

It appears to us, that Mr. Webster has confounded two things, which ought to be kept distinct. He seems to take it for granted, that a diminution of the cold of winter is necessarily attended with an increased heat and length of the summer, or he has mistaken the nature of the olive and the fig, which require a long, warm, and dry summer, rather than a mild winter. In the time of Pliny, and for a long time before, Italy produced olives. Very well, what is the conclusion? why, that the

warmth and duration of summer were sufficient to bring them to maturity, and to be sure, that the winter was not so cold as to destroy them. Now we know that the olive will bear the winter at Paris, in the northern provinces of France, and even in England. Duhamel says, "we have long had the olive *en espalier*, and that it supports the ordinary winters without being covered; and it yields some fruit in warm and dry seasons. Still it is cultivated merely as a curiosity."* He is speaking of Paris. "The olive has long been cultivated in Britain," says Woodville, "and when sufficiently sheltered, it bears the cold of our winters very well, though in this country it rarely produces flowers, and we believe never ripens its fruit."† We are told "that several olives were planted against a wall at Cambden-house, near Kensington, which succeeded very well till their tops were advanced above the wall, after which they were generally killed in the winter. These in 1719 produced a good number of fruit, which grew so large as to be fit for pickling, but since that time the fruit has seldom grown to any considerable size.‡"

It appears also from the very great age of the olive, there being some in Italy now, as we are informed, more than two hundred years old, that they are not easily killed by frosts, for Mr. Webster has shown that within that period there have been some very severe winters, even in Italy, and the south of France; and, if they have survived those winters, in which the Rhone and the rivers of Italy were frozen over, that they are not cultivated farther north than the Cevennes, and indeed throughout Germany and England, must be ascribed to some other cause, than the ordinary severity of winter in these places.§

* Traité des Arbres Tom. ii. p. 54.

† Woodville's Med. Bot. vol. ii. p. 370. ‡ Millar's Dict.

§ In the remarkably severe winter of 1789, even the Rhone, which runs through the middle of the olive region, in the south of France, though a large and rapid river, was frozen over. During this winter, we are told, that many olives, as well as other trees perished. But it seems that some withstood the cold, though severer than is often met with in the northern parts of England. The young and tender branches of the olive are sometimes killed by less severe cold, sudden changes, or some other unfavora-

It is evident then, that the olive is capable of supporting very severe cold, quite as severe, as any one will pretend prevailed in Italy eighteen centuries ago. The same may be said of the fig; indeed the fig seems to be a hardier tree than the olive. It is cultivated in gardens about Paris, in places that are sheltered from the cold winds, and that lie open to the south, and is not liable to suffer from the cold, except in severe winters. Duhamel says, "he has seen fig trees of a prodigious size at Brest, but it rarely happens, that the heat is sufficient to ripen the fruit."* There are several fig trees in the neighbourhood of this place, planted by the side of a wall, which have survived such winters as those of 1810 and 1812, by means of a covering of earth of no great depth, and which by no means protects them from very severe frosts.†

We may now very fairly, we think, set aside all that Mr.

ble circumstance in the weather, like our peach trees, and send forth new shoots again in the spring. It is cultivated in and about Paris, not only by the side of walls, but in the open field. It is liable to suffer, however, in severe winters, as we have mentioned, when thus exposed.

The olive is of extremely slow growth. It is planted in rows about 15 or 20 feet apart, like our apple trees, and the soil, which need not be rich, admits of being cultivated for other purposes. After twenty years it begins to produce fruit very well, and sometimes much earlier, and generally continues fruitful till it is destroyed by the cold, which is sometimes more than two centuries. The fruit for pickling is gathered about the last of September and beginning of October, but it is not mature till the last of October or beginning of November, when the fruit is black. From this time till the middle of December it is gathered for oil; and one tree will yield from 15 to 20 pounds. It is evident then, that the olive requires a very long summer, viz. from the middle of March to the last of October *Duhamel Traité des Arbes. Mr. Jefferson's Memoir to the Agricult. Soc. South Carolina.*

* Traité des Arbres Tom. i. p. 238.

† We have confined ourselves to the olive and the fig, as Mr. Webster has selected them in particular. There are other trees common in Italy now, that he would have found less favorable to his purpose. The orange, for instance, is not to be heard of in the writers on husbandry of the Augustan age. No inference however can be drawn from this fact, as we do not know that any attempt was made to introduce it into Italy at so early a period. It appears moreover that the olive had not long been known in the time of Pliny, and that in the time of Tarquinius Priscus, it was not known even in Spain. See note to Columella chap. viii.

Webster says about vegetables, as irrelevant to the subject. It is to be recollected that the question regards simply an amelioration of winter. If it related to the heat or duration of summer, the argument would be a good one, and it may be inferred, we think, from what Mr. Webster has said, though he has not inferred it, that the summers were as long and as hot, or nearly so, in the Augustan age, as they are now. Whatever bearing this may have on the subject, we admit that Mr. Webster is fully entitled to all the use that can be fairly made of it. It seems very natural at first to suppose, that as the sun is the common source of heat to each of the seasons, whatever affects one must affect them all in the same manner; that the cause which renders permanent the heat of summer, must preserve unchanged the temperature of winter. But however plausible this doctrine may appear, we are inclined to believe, that it is not agreeable to fact; that there is not, from what we can learn, this sympathy among the seasons. Indeed a very substantial reason may be given, why the length and temperature of the summer have continued nearly constant, while the severity of winter may have abated. We would not by any means be understood to prejudge the question, and make use of theoretical reasoning, where the inquiry is solely about a matter of fact. We wish merely to show that the summer heat continuing the same for any period, authorizes no inference whatever with regard to the permanency of the winter temperature.

The air appears to receive no heat directly from the sun, not even by the utmost condensation of a burning-glass. It is warmed by coming in contact with the heated earth, and being expanded, it rises, and being agitated also by wind, the heat is diffused through a stratum of considerable thickness.* The temperature of the air therefore in which we live, depends upon that of the substance on which it rests; and as different substances, even when equally heated, parting with their heat with different degrees of facility, are capable of communicating dif-

* As we ascend into the atmosphere, it grows colder, till, at the height of about three miles under the equator, we arrive at the region of perpetual congelation. The elevation of this point is less toward the poles; in

ferent degrees of heat to the air in the same time, we see why the air over a sandy desert is warmer than that over a verdant field; and this again than that over a forest. Besides, the solid parts of the earth taken together, on account of the heat extending to a less depth, are heated and cooled more suddenly, and to a greater degree than the waters of the ocean. The sun's rays falling upon the solid earth during the summer season, the heat is communicated downward slowly, and with difficulty; of course the surface becomes proportionably warmer. But the same degree of heat being diffused through a great depth of water, agitated by winds and tides, the heat at the surface is much less intense. During the season when the influence of the sun is partially withdrawn, the thin stratum of earth soon parts with its heat, and advances rapidly towards extreme cold. The waters of the ocean however, as they lose their heat, become heavier and descend; while a warmer portion rises to the surface, and this, being cooled, gives way to a third, and thus disputing, as it were, every particle of its store, it retains a much greater portion through the winter, till it is at

the latitude of 42° it is only about one mile and a half above the surface of the ocean. It varies however at different seasons, being higher in summer and lower in winter. It may be asked, if the air is warmed through the medium of the earth, why the tops of high mountains are not capable of communicating heat to the surrounding air, as well as low plains. To this it may be answered, that they would if the air remained at rest, but being constantly in motion, the tops of mountains are swept by cold currents at their own elevation, which continually carry off the heat, that is received; while low grounds are visited by portions, that have been before heated. It might be supposed, that the currents of air would flow up the sides of mountains, and thus communicate to their summits the warmth of the lower regions. This however cannot take place to any considerable degree, on account of the greater density of the lower portions of the atmosphere. Beside, if this warm and heavy air were driven over a mountain, its expansion would very effectually reduce its temperature.

It is true, that the atmosphere near the ground in the winter is colder, than that at some height above it, but this, instead of being an exception, is a consequence of what we stated above, that the atmosphere depends upon the earth for its temperature. Being once heated, it retains its heat longer, than the earth from which it receives it. Moreover it is thought, that the warm air from the southern hemisphere, by means of its heat and consequent elevation, flows over into the northern, and returns again during our summer.

length recruited by a fresh supply. The waters of the ocean therefore are cooler in summer, and warmer in winter, than the dry land in the same latitude, and of course the air incumbent on them, partaking of the same temperature, is far less subject to the extremes of heat and cold. This air, being borne over the land by the operation of whatever cause, will carry its own climate with it, and communicate it to those places over which it passes in different degrees, according to their distance from the sea. Hence those sea breezes, which are so tepid in winter, and so cool in summer, which give such a delightful climate to places surrounded by large bodies of water, and which indeed are so necessary to the habitableness of many places in tropical latitudes. Now whatever tends to multiply these currents from the ocean, and extend them toward the interior of continents, must tend in the same degree to equalise the temperature of summer and winter, and will as necessarily moderate the heat of the one, as it does the cold of the other. The naked earth, as we have before shown, is capable of communicating to the atmosphere a greater degree of heat under the same circumstances, than the vegetables that cover it. The denudation of a country therefore, by clearing and cultivation, as it lays open the soil to the influence of the sun's rays, which before fell with less effect upon the substance of vegetables, not only exposes it to more heat directly, but this very circumstance of a greater degree of heat, rendering the air lighter, and causing it to ascend, whereby the surrounding air rushes in to take its place, conspires with other causes to multiply and prolong those temperate currents from the ocean. This cause, it will readily be perceived, operates with peculiar force in the winter, because the ground is then more exposed, and many vegetables, even in those countries of which we are speaking, are stripped of their foliage, but in summer, and especially where vegetation is so luxuriant, as it is in Italy, and where it may be said there are still forests of fruit and ornamental trees, the substance of the soil is probably almost as effectually screened from the influence of the sun, as it was in its natural state. It is apparent then, we think, that although the summers may remain without any essential alteration of their temperature,

it does not thence follow, that there has been no mitigation of winter. On the contrary it seems not improbable, that the winters and summers both have become more moderate, and especially the former.

We have now done with Mr. Webster's argument from vegetables, and proceed to consider the evidence, derived directly from ancient accounts of a European winter, compared with meteorological observations, and the representations of modern travellers. We begin with Italy, and select Rome and Naples in particular, as these places will give us a pretty just idea of the temperature of the middle region of that country; and fortunately we have the means of determining with some precision the degree of cold, which ordinarily prevails in these places at the present day. We have regular thermometrical observations, taken at Rome for a number of years; and it appears by carefully comparing these with similar ones, taken in the neighbourhood of Boston, about the same distance from the sea, that the cold of the winter months at Rome answers very nearly to that, which we ordinarily experience in May and September. We find instances indeed of as great a degree of cold occuring in these months with us in the course of four or five years, as is felt at Rome in the same period; and by taking the average of the greatest cold of each year in the two cases, we find that, that of May or September falls short only about three degrees (Fahrenheit) of a corresponding estimate of the greatest winter's cold at Rome. It is to be observed also, that the Roman observations were made at 7 o'clock A. M. about half an hour before sunrise, while the others were made at sunrise, a circumstance, that ought to reduce this difference to a quantity altogether too small, to be worth regarding. But the cold of April or October among us, exceeds the greatest cold at Rome by ten degrees.* We can judge therefore pretty accurately of the severity of a Roman winter in modern times. Naples is still milder, and very much milder. The accounts of travellers make a difference of several degrees. But we have little need of a thermometer to

* In the above comparison we have made use of four years observations at Rome, of which an abstract is given by Dr. Holyoke, in the Mem. of

inform us, when we learn from the best authority, that they have generally no chimneys in their houses, that oranges are seen in the open fields, covered with leaves, flowers, and fruit, in the midst of winter, not only at Naples, but within seventy miles of Rome. Keysler says, "that little or no winter is known here; garden vegetables are in season all the year round. Ice is seldom seen in the level country, and snow fell but twice during these last five years, and then it dissolved as soon as it touched the ground."*

Let us now see, what we can collect from the ancients, relative to the winters in these places. What first strikes us in this inquiry, and what, we think, must obtrude itself upon the mind of every one, who is in any degree conversant with Latin authors, is the very great copiousness of their language upon the subject of winter and its effects, and, of a language not merely descriptive, but strongly indicative of uncomfortable sensations. We cannot get rid of the impression, that this language was conceived in a climate, very different from ours in

the Amer. Acad. vol. ii. p. 88. and eleven years observations, carefully made at Andover, Massachusetts, with a good instrument, by the late Rev. Jonathan French. The former were made at 7 A. M. 2 P. M. and 9 P. M. of each day. The latter were made at sunrise, warmest time of the day, and sunset. The Roman observations being at 7 o'clock in the morning, give us the greatest cold in the winter. The Andover observations being at sunrise, will fall short one or two degrees of the greatest cold. The *mean* temperature of our Mays and Septembers, and more especially the heat at midday, exceed those of the winters at Rome very considerably, on account of the greater length of our days at that season. But this only makes us more sensible to the cold, and it is with that, and that only, that we are at present concerned.

	Winter.		May.	April.
Greatest cold at Rome	31·1°	Ditto at Andover	31°	17°
Mean of greatest cold	33·5		36·3	23·7
Mean of all the morn. obs.	44·2		48·6	37·9
Mean of obs. at 2 P. M.	48·2		64·1	52·7

The mean temperature of morning and midday at Rome, above given, are the result of only one year's observation, this being the only entire series to which we have had access. The cold of May and April, as here given, represents also that of September and October very nearly. See Mem. Am. Acad. vol. iii. p. 404.

* Travels vol. ii. p. 364.

the month of May or September; very different from what the Italians experience at this day. Our school boys, after wading through the snow, or sliding upon the ice, read Horace's or Virgil's description of a winter at Rome, and think of nothing else all the while, but a New England winter. We should find no difficulty in translating any meteorological journal in the country into classical Latin; if we except what relates to the instruments employed. Ovid was banished to the borders of the Euxine, and during his residence there amuses himself with giving an account of the climate; and this he does without inventing or borrowing any new terms, and yet his description would apply very well to Canada or Hudson's Bay. Beside all this, we are utterly at a loss to account for the agreeable associations, which, in a Roman imagination, were connected with fireside; surely, instead of that hardy race, which we have been led to suppose them, they must have been the most tender and delicate beings in the world, nay, very salamanders, to love a fire so well, if their winters were not severer than our Mays and Septembers.

Livy tells us, "that at the siege of Veii the Roman generals, entertaining greater hopes from a blockade than from an assault, determined to continue their operations during the winter; and accordingly began to build tents, a thing quite new to Roman soldiers. This coming to the knowledge of the tribunes of the people, they represent it as a great grievance and hardship, that the Roman soldiers, in the midst of labor and toil, should lie in tents, exposed to the severity of winter, covered with frost and snow; never laying their arms aside, even in that severe season, which suspends all wars both by land and sea." In reply to this complaint, and with a view to reconcile the commons to the proceeding of the generals, Appius Claudius, in the course of a long speech, reminds the Romans, how their fondness for hunting carries them through frost and snow, to the forest and mountains; and compares those, who would desist from such an enterprize, to summer birds, which, as soon as autumn arrives, look about for shelter and hiding places. He entreats them to consider what terror it will strike into the minds of their enemies, when they see, that neither the

fatigue of a tedious siege, nor the severity of winter *(vis hiemis)* can drive them from a place which they have once invested."* Veii, it is to be recollected, is situated only twelve miles from Rome, and that, what is here related, took place more than 300 years before Livy wrote. The arguments, which he puts into the mouths of his speakers, must be considered as good evidence of those facts, on the truth and familiarity of which their whole force depended, as his authority is for any fact whatever. So far as Livy's own experience was concerned, it related principally to Rome and Naples. Let us imagine now all this to relate to a season, similar to our Mays or Septembers, or even Octobers, and how ridiculous shall we make the Romans or their boasted historian appear. How would an American army, that hesitates not a moment in commencing a long, difficult expedition in the midst of a Canadian winter, laugh at the effeminacy and chickenheartedness of a Roman soldier. Let us suppose for a moment, that, while the American army was encamped before Boston, it was determined, after much deliberation by the commander in chief, upon the setting in of September and October, to remain in the field, and brave all the hardships of these severe months, on account of the great importance of maintaining his position. Upon which the good friends of the people immediately seize the precious moment, and begin to write in the newspapers, and to declaim in caucuses and townmeetings. They represent it, as a most cruel, oppressive, and unheard of thing, that an American army should be obliged to continue in camp during this inclement season, covered with frost and snow, and with nothing but tents to protect them from the severity of the weather. The occasion calls forth the first talents in the community. To do away impressions of so alarming a nature, and to prevent serious consequences, the chief magistrate undertakes to appease the public mind; and without calling in question any of the facts alleged, appeals to the virtue and patriotism of the citizens, and pictures to them the advantages that will result from a measure so imperiously demanded, by inuring them to hardship and suffering, and by demonstrating in the very face of their ene-

* Liv. Lib. v. 2, 6.

mies, that there is nothing which an American soldier is not capable of enduring; and at the same time very gravely reminds them, that they voluntarily expose themselves to frost and snow during this season, which they complain of as so intolerable.*

Some time after that, which we have related above, Livy gives a particular description of a winter, in which "there was much snow and cold, the roads were blocked up, and the Tiber innavigable." He says, moreover, "that the price of provision was not raised, as large stores were previously laid in."† This would lead us to infer, that the roads continued impassable, or the Tiber shut up, for a considerable time. But we forbear to insist much upon this piece of information, because Livy tells us expressly, that it was a remarkable year, (insignis annus) and then proceeds to mention, what we have stated above. How much it exceeded the common years in this respect, it is impossible to say. We believe, however, that it would be very difficult to find an account of such a winter in modern times; or if such had occurred, to find so slight a notice of such a phenomenon.

We will now leave Rome, and go to Naples. Here, after a residence of seven years, we are told that Virgil wrote his Georgics; and not merely for the use of the peasants upon the mountains, and in the northern parts of Italy, as Mr. Webster seems to intimate; but, at the express and earnest desire of Augustus, to promote the general interest and welfare of the

* It ought to be remarked, that the winter in Italy is more remarkable for frequent rains, than any other season of the year. Judging from two years, which we have examined, there is very nearly the same number of rainy days per month through the winter, that we have ordinarily during March and April. Mr. Webster seems to think, that *Aquarius*, through which the sun passed in the midst of winter 1800 years ago, indicated with the Romans a rainy season, and of course a mild winter. We were surprised at this; for certainly it would have the same force in any other country, where the name is adopted; and water-bearer with us might, we conceive, be brought with equal propriety to prove that our Februaries are rainy and mild, and of course that we have no winters; for we have always supposed, that the Romans had as little to do in the formation of the Zodiac, as we.

† Lib. v. 13.

country, to draw the minds of the people off from the civil wars and troubles in which they had been involved, and to allure them back to the peaceful occupations of husbandry. Beside the charms which he throws around the pursuits of the peasant in the summer season, he does not fail to recommend sports also for the winter, "when the snow lies deep, and the ice is driven down the rivers."

Cum nix alta jacet, glaciem cum flumina trudunt.*

He directs the husbandman "to feed his sheep in warm stalls, till the leafy summer returns, to cover the hard ground with large armfuls of straw and fern, lest the cold ice injure the tender flock,† to protect them from the ice and snowy winds, with the more care, as they are incapable of providing for themselves." But upon the opening of spring, says he, "drive your flocks to pasture. Hie you to the cold fields with them at early dawn, *while the grass is yet white;*" (dum gramina canent.) If it was common then to have frosts in the spring, which this language certainly seems to imply, this season was surely, to say the least, as cold then, as the winters are now. If it is said, that this may relate particularly to the hilly regions, and northern parts of Italy, though we think from the general strain of the whole book, that it was intended for general use, and adapted to the mean state of the climate, still we have a passage from the same author, which is not to be evaded in this way. "I knew," says he, "an old Corycian, who cultivated a little spot of ground on the banks of the Galesus, near Tarentum. He gathered roses in the spring, and apples in the fall, and *when severe winter split the rocks with the cold, and bound with ice the currents of water*,‡ he gathered the leaves of the flexible acanthus,§ chiding the tardy summer, and the delaying zephyrs." This is related, as taking place south of Naples, and on the bay of Tarentum, where the winters now are at least as mild, as they are at Naples.

* Georg. lib. i. l. 310. † Georg. lib. iii. l. 295.

‡ Et cum tristis hiems etiam nunc frigore saxa
Rumperet, et glacie cursus frenaret aquarum. Georg. lib. iv. l. 135.

§ Virgil in another place speaks of the acanthus as an evergreen, "baccas semper frondentis acanthi."

It should seem from the frequent mention of stalls, and the care that was taken in winter of cattle and sheep, that the dumb beasts were formerly as incapable of bearing cold, as the men. Virgil directs the husbandman to let his cattle go to the stacks all winter, (nec tota claudes fœnilia bruma.*) Horace, in his description of spring, selects as a prominent feature, Ac neque jam stabulis gaudet pecus,† the flocks no longer seek the stalls. Columella has written a chapter upon hay-making. But it is idle to go about to prove, what is so notorious, that it was customary to provide fodder for cattle in summer, and to give them shelter in the winter. We are not indeed able to say, that nothing of this kind is known in Italy at the present day, but we should think it very strange, if it were necessary to take such care of these hardy animals, where the delicate orange and garden vegetables require no protection. The winters at Charleston,‡ South Carolina, are at a mean about eight degrees colder than the winters at Rome. Yet we are told, that here "cattle and sheep experience little care, and derive but a small portion of their comforts or food from their owners. For the most part they are left to provide for themselves from the bounties of nature."§ Indeed in North Carolina, "there is not one planter in ten, that provides shelter for his neat cattle, and a great proportion do not provide dry stables for their horses."‖

Nearly in the same latitude with Naples, and on the borders of the same sea, lies Barcelona; in the neighbourhood of which, Livy tells us, that Scipio, "*roused from his winter quarters* by the depredations of the enemy, laid siege to their city, Tarraco, and took it. Upon which, he observes, that the besieged would not have been able to make a defence, but for the severity of winter, which obstructed the operation of the besiegers. The siege lasted thirty days, during which the

* Georg. lib. iii. l. 321. † Carm. lib. i. ode 4.

‡ The *greatest* winter's cold at Charleston varies between 17° and 34°, the mean is 25°. The mean temperature for the year is 64°, that of Rome being 60°. This is the result of 8 years obs. Mem. Am. Acad. vol. iii. p. 111.

§ Ramsay's South Carolina, vol. ii. p. 226.

‖ Williamson's North Carolina, vol. ii. p. 216.

snow lay seldom less than four feet deep; and it had covered over the machines and engines of the Romans in such a manner, that of itself alone it proved a sufficient defence against the fires, which were often thrown on them by the enemy."‖ Here is no surprise expressed at the severity of the season, not a word dropt, from which we could infer, that it was uncommon; nothing more is said, than what came naturally in the way of the historian, and was necessary to the proper understanding of the war in this place. Beside, let it be supposed, that it was a remarkable winter; it was such a winter, as is altogether unknown to the present inhabitants of the country. It is true, that severe cold and snow sometimes visit even Spain, as Mr. Webster has shown, but they are very rare, only two or three times in a century, and then they are of short duration; and the effects which they produce, so fatal to many of their fruits and stores, so afflictive to their tender constitutions, so entirely at war with their ordinary habits and occupations, cannot fail to demonstrate the infrequency and accompany the report of such occurrences.

Let us now for a moment look at the climate in Spain, and see how very ill Livy's account corresponds with the present winters in that country. Clarke says, speaking of Barcelona, "they have pears, cauliflowers, salads, beans, &c. fresh from their gardens, without the help of a hothouse, in the middle of our winter."* Southey, the poet, travelling through the country in the winter of 1795, often speaks of the beauty and verdure of the country.† He begins a letter from Corunna, nearly a degree north of Barcelona, December 19, thus—"We were serenaded all night by the muskitoes."‡ He writes January 16, "The violets are in blossom now, and the sun so hot, that we met a man riding without a coat or waistcoat, his shirt open, and his sleeves tucked up, a cool undress for January."§ This was not far from Madrid. Again he says, "On the 29th of February we had a little snow. A Portugueze clerk, who was going out on business when it began, refused to leave the counting-house, because he did not understand that kind of weather. *It is fourteen years since the last snow fell at Lisbon.*

‖ Baker's Livy, Book xxi. 61.

* Letters on Spain. † p. 46. 2d. edition. ‡ p. 38, 62. § p. 168.

Dr. H. was in his chaise, when it began. The driver leaped off. You may get home, as you can, said he, as for my part, I must make the best use I can of the little time this world will last; and away he ran into the next church."* The latitude of Lisbon is about two degrees and two thirds south of Barcelona. In other respects affecting their climate, they are similarly situated. The difference of winter temperature corresponding to this difference of latitude, according to the tables of Kirwan, amounts at a mean to between 4° and 5° of Fahrenheit.

We now pass to a more northern latitude, to the place where Ovid spent seven years, and whose winters he has so particularly described. "The snow falls," says he, "and is dissolved neither by the sun nor rains; but, being hardened by the north wind, it remains in many places two years. (bima) The inhabitants are able but poorly to guard against the cold with skins and other garments, which leave nothing but their faces visible—their locks rattle with pendant icicles, and their beards glitter with accumulated frost. Their wine is frozen in the jars, and is served up in a state of congelation. The Danube and the Euxine are frozen over, the ships are fixed fast as in marble, and both the river and the sea are a highway for man and beast."† Nothing is mentioned, which would lead one to suppose that this degree of cold was uncommon. Nay, he expressly mentions, that it happened repeatedly, while he was there. Moreover he speaks of the cold as being perpetual, and of the country as being never without an enemy or snow. But it is intimated by Mr. Webster, and has been suspected by others, that a climate, so uncongenial with the fervid imagination of Ovid, would hardly be likely to find justice at his hands. We are happily, however, able to vindicate the character of the unfortunate poet. Virgil gives an account of this country, that agrees very accurately with the foregoing representation. He says, the "snow rises to seven cubits (ten feet)—the winter is perpetual; perpetual are the chilling winds—cattle die with the cold, and deer are killed with knives, being plunged in snow nearly to the tops of their horns."‡

But Virgil is also a poet, though he has ever been consid-

* p. 248. † Trist. lib. i. El. 10. ‡ Georg. lib. iii. 349. et seq.

ered, as no less correct in particular facts, than true to nature generally. But we have other authorities, not liable to the same objection, to corroborate what is here stated. Dionysius speaks of their perpetual snows, (Αιει σφιν ψυχρη τε χιων)* of their horses, mules, and sheep in the stalls, perishing with the cold winds. "Nor do the men," says he, "escape, who remain exposed to these winds. They fly, however, to another region, leaving their country to the winter tempests."† Strabo also, whom Mr. Webster will admit as good authority, says, "we may learn the degree of cold about the mouth of the Mæotis, from this circumstance, that it becomes in winter a beaten road" (πηλον και ὁδον.)‡ Mr. Webster cites him, as mentioning, "that a general of Mithridates defeated the barbarians upon the ice, on the very spot, where in summer he defeated them in a naval engagement." But this, he considers, as of no weight, because we do not know but that "the fact mentioned was owing to an unusual occurrence, and related for that very reason. The circumstances," says he, "naturally lead us to conclude, that the ice in that year was stronger than usual, and that the winter was uncommonly severe."§ But this same author, in another place, says distinctly, not as a historian, but as a geographer, "that the Palus Mæotis is frozen over *during the winter*, (κατα τους χρυμους) so as to be passed on foot.‖

Again, Mr. Webster quotes Strabo, to prove, that the vine is cultivated here. But this same Strabo tells us also, that "they buried it deep in the ground in the winter."¶ Beside we know that there are some species of the vine, that will bear almost any climate. Ovid says repeatedly, that the country would not produce apples. And that they had no vines of any value, is pretty evident from the following lines.

Non hic pampinea dulcis latet uva sub umbra,
Nec cumulant altos fervida musta lacus,
Adspiceres nudos sine fronde sine arbore campos;
Heu loca felici non adeunda viro. Trist. Lib. iii. Eleg. x.

But in the 12th elegy of the same book, Ovid tells a different story.

* Περιηγησις l. 668. † l. 591. ‡ Lib. vii. p. 307. Ed. Par. 1620.
§ p. 53. ‖ Lib. xi. p. 494. ¶ Lib. vii. p. 307.

"Here," says Mr. Webster, "we have more certain data to judge of the winters in Thrace. The poet, after indulging his fancy in describing the gloomy scenes of a Thracian winter, assumes a more cheerful air, and paints the beauties of the following spring."

"Now the merry youth, says Ovid, gather violets, which the uncultivated earth produces; the meads are decorated with blossoms of various hue, and the woods resound with the melody of birds. To this he adds, that the swallows appeared and built nests *sub trabibus*. If swallows appeared in Thrace, immediately after the equinox, the spring must then have been three or four weeks earlier than in New-England; for they do not appear here till late in April. The same fact is indicated by the blossoming of plants. These representations of the poet appear to be important in settling this question." pp. 62, 63.

We might observe, that this glowing description of spring, from a poet impatient of winter, ought not to be insisted on by Mr. Webster, who objects to poetical authorities, and contends, that drawing general conclusions from particular facts, has been the source of most of the errors on this subject. But we have a much more satisfactory reply to make. It is very evident from reading this elegy through, that the poet is indulging his imagination in a visit to his beloved Italy. For he speaks afterward of the sports, of the theatre, and of the forum; and then bursts out in an elegant apostrophe to those, who enjoyed the city, interdicted to him, "who still beheld the snow melting with the vernal sun; and the waters were hardly capable of being dug from the hard lake." "The sea," it is true, "no longer accumulated ice, nor did the Ister resound with the creaking teams."* This, it will be recollected, was the vernal equinox, the 21st of March. If such was the appearance of the country at this season, we can be at no loss about the severity of winter. We would remark also, that we have here

* Scena viget, studiisque favor distantibus ardet:
Proque tribus resonant terna Theatra Foris.
O quater, et quoties non est numerare, beatum,
Non interdictâ cui licet Urbe frui!
At mihi sentitur nix verno sole soluta,
Quæque lacu duro vix fodiantur aquæ.
Nec mare consecrescit glacie: nec, ut ante, per Istru
Stridula Sauromates plaustra bubulcus agit.
Incipient aliquæ tamen huc adnare carinæ.

Trist. Lib. iii. El. xii.

information of no small importance with regard to the opening of the spring at Rome. As Ovid writes from recollection, he must certainly in this description represent a common season. Now we have before us some remarks, subjoined to meteorological observations at Rome, taken in 1787, in which mention is made of "the birds sporting and building their nests" in February, and of "apple-trees and peach-trees being in blossom" as early as the 7th of this month.

We will now see what we can learn of the modern temperature of this country, whose climate we have been examining. Tomis-var, the ancient Tomos, the place of Ovid's banishment, is in Bulgaria, in latitude about 44½°, nearly on the same parallel with Florence, Marseilles, and Bordeaux; and, like the two latter, in a level country, near the sea, and thus favorable for mild winters. Bushing, in his ample geography of this country, has not a word about snow or cold weather in his account of Bulgaria. On the contrary, he says, "it is extremely rich and fruitful, producing corn and wine, even to superfluity."* Pinkerton, in his geography of this country, very naturally adverts to the picture, which Ovid gives of the climate. This circumstance, taken in connexion with his means of information with regard to the present aspect and temperature of the country, may render his opinion particularly valuable. "It seems an undoubted fact," says he, "that the seasons have become more genial, since Europe has been stripped of those enormous forests, which diffused humidity and cold; for countries, anciently represented as full of morasses and water, are now dry and salubrious, and the rivers are not only confined to narrower channels, but many, that used to freeze every winter, now devolve a turbid, but free stream. The climate of Moldavia, which Ovid would have painted like that of Lapland, is now little inferior to that of Hungary. In Wallachia the air is so temperate, that vines and melons prosper."†

Several degrees north of Bulgaria, are situated the southern provinces of Russia, so famous for the fineness of their climate, and the abundance of their productions; where, and indeed in the more central parts of the empire, "are seen large

* Vol. ii. p. 125. † Geog. vol. i. p. 349. Am. Ed.

orchards of fruit trees.—Apples and pears are found as far north as 49°; plums and cherries extend to the 55°."*

Dr. Clarke, in the year 1800, passed down the Don, through the Sea of Azof (Palus Mæotis) and the Black Sea, to Constantinople, where he arrived the last of November. It appears by thermometrical observations, which he took every day at 12 o'clock, that the climate of Odessa, about 2° north of Tomis-var, from the 18th to the last of October, agrees very nearly with that of London. After leaving this place, the state of the thermometer indicates a temperature from 5° to 12° above that of London, at the same hours. For the first ten days, during which time he was between the latitudes 45° and 41°, the thermometer ranged from 51° to 65°, and in no instance was it down to freezing, till the end of December; and the mean height during this month at Constantinople was about 50°. Among the advantages of the port of Odessa, he mentions, "that of being obstructed by ice so rarely, that a vessel may generally escape; whereas in the other ports of the Black Sea an enemy from the ice may attack the ships, as well as the works."† It is evident then, that the sea itself is open in winter; otherwise what would be the propriety of saying, that Odessa is rarely obstructed with ice? Now two degrees south of this, Ovid, as we have seen, speaks of *some* vessels *beginning* to arrive on the 21st of March. The Sea of Azof, according to Dr. Clarke, is still frozen over,‡ as it was formerly,

* Pinkerton Geog. vol i. p. 242. † Vol. i. p. 516.

‡ Dr. Clarke cites Heber, as saying, "that the sea is frozen from November to March, and navigation is seldom safe earlier than April." He mentions also, that a captain of a vessel told him, "that he was once detained five months in the mouth of the Danube, by the freezing of the sea." These accounts are not very easily reconciled with those of other travellers, as Busbequius and Mottraye, who mention no inconvenience in passing through this country in the midst of winter. See Ph. Tr. vol. lviii. p. 63. Indeed Dr. Clarke relies upon the authority of others, and claims nothing on account of his personal observation in this particular. He refers for information to an article in the Naval Chronicle, vol. xxi. p. 216. on the commerce of the Black Sea, which appears to be drawn up with great care and ample materials, from correct sources; and among minor inconveniences attending the navigation of these waters, no mention is made of any obstruction or difficulty in consequence of ice. Besides, Dr. Clarke enu-

but the inhabitants of the surrounding country, instead of flying, make a very profitable business of taking fish through the ice during the winter; and the country, bordering upon this sea, instead of being exposed to perpetual snow and cold winds, now produces generous wines, and even the olive in some places.

With regard to Germany and Gaul, we have but little to say; as we cannot fix upon any one particular spot, to which to refer ancient and modern accounts, so as to be able to compare them with any degree of precision. Mr. Webster quotes Gibbon, as saying, "The Rhine and the Danube were frequently frozen, and capable of sustaining the most enormous weights. The barbarians often chose the winter to transport their armies and cavalry over a vast and solid bridge of ice. Modern ages," says he, "have not presented an instance of a like phenomenon."* With regard to this last assertion, Mr. Webster shows, that Gibbon was mistaken. He mentions the well known fact of the French troops crossing the Rhine into Holland on the ice, in January, 1795; also that of the Russians being supported by the ice at the battle of Austerlitz. He says moreover,

"I know not what ages precisely, that author intended to include in the description of *modern;* but both the rivers mentioned have *often* sustained men and carriages on the ice within the *two last centuries*, as well as in preceding ages. In 821 and 994, history expressly mentions this to have been the fact. In 1233, the rivers in Italy sustained the heaviest loads on the ice; of course the Rhine and Danube must have done the same. The fact is also recorded of the year 1306; and in 1363 the Rhine was covered with solid ice for ten weeks. In 1402 the Baltic was passable on the ice for six weeks; and we may well suppose the Rhine and Danube were not open. I have no particular account of the effects of the rigorous

merates among the articles of export at Tscherchaskoy (north of the Sea of Azof) "*a little wine;* although generally," says he, "they consume all their wine.—It resembles Burgundy, and is between Burgundy and Champaign.—If they would suffer the grapes to ripen," continues he, "and knew the best art of preparing, it would certainly surpass all the wines in the world; so rich and generous are the grapes, from which it is expressed." vol. i. p. 234. Pinkerton says, that "the olive has been tried in vain at Astracan; but prospers in the southern mountains of Taurida, (the Crimea) along the Euxine." vol. i. p. 242.

* Vol. i. chap. 9.

cold of 1608, 1610, 1664, 1684, 1698, 1709, 1716, 1740, 1763, 1776, on those particular rivers; but the general accounts describe these and many other winters, during the two last centuries, as converting *all* rivers into highways for carriages, even as far south as Italy and Spain. But I have better proof of the fact. It is well known, that the winters in England are *much milder* than in the same latitude on the Continent. This is always the case, and an undeniable fact. Now I have accounts that the Thames at London has been covered with solid ice, equal to the support of the heaviest loads, not only in most of the years mentioned, but in many others, during the two last centuries. From ten to fifteen or twenty rigorous winters occur, in every century, which convert most of the *small* rivers of Germany, France, and England into highways; and several winters, in every century, produce the same effect in all the *large* rivers." pp. 26, 27.

Mr. Webster shows also, that the Danube was frozen over even in March, in the year 1717, and that, "the preceding winter had converted all rivers, even in Italy, into bridges." Upon this, we would observe, that the inquiry we are upon has nothing to do with these very rare instances of extreme cold; upon which, when they happen, every body cries out, with wonder and astonishment, as if the order of nature were changed. Surely no one, in describing these rivers, would mention an event, that occurs not twice to the same individual, without some qualification; any more than a person, in giving a history of New England, would assert, that they have dark days there, when it is necessary to use candles at midday. Yet Diodorus Siculus,* as quoted by Mr. Webster, says,

"Gaul is infested with cold to an extreme degree. In cloudy weather, instead of rain, great snows fall; and in clear weather, it freezes so excessively, that the rivers are covered with bridges of their own substance, over which large armies pass with their baggage and loaded waggons. And there being many rivers in Gaul, the Rhone, the Rhine, &c. almost all of them are frozen over; and it is usual, in order to prevent falling, to cover the ice with chaff and straw." p. 20.

"Colder than a Gallic winter," was a proverbial expression, as has been mentioned by several writers. Now we cannot help considering this phrase, as also the language of Diodorus Siculus, as relating, not to phenomena that occurred at intervals of 30 or 40 years, but to the ordinary winters in Gaul. But,

* Lib. iv.

whatever may be the import of these expressions, it is clearly with the ordinary winters, that our inquiry is concerned, it is with such, as men confidently calculate upon and regulate their pursuits and occupations to meet. Evidence derived from this source, must determine us, if we are determined at all, and put an end to the dispute. It is evidence of this kind, that we have endeavoured to produce. We shall content ourselves with mentioning one more instance. Let it first be recollected that Mr. Webster's researches on the subject of cold winters leave us no room to doubt, that the freezing of the Rhine and Danube to any considerable degree is an exceedingly rare occurrance in modern times. Now we have proof, that appears to us irresistible, that even the Po in Italy was frequently frozen, so as to be passed on foot. Ælian, who lived in the reign of Adrian, and wrote a treatise on the nature of animals, describes a method of taking fish in this river, which depended upon its being frozen so as to support persons. "At the confluence of the Po and Tænarus," says he, "they have a singular way of taking fish, as I learned from a Mitylenian, whom I knew. In the winter, until the water is bound with ice, (Πεπεδημενων αυτοις υπο κρυσαλλω των ρευματων,) they attend to agriculture. Then, *upon the opening of spring, the rivers continuing to be frozen,* (Ειτα υπαρχομενω τω ηρος, των ρευματων των προειρημενων, δι ην αιτιαν ειπον, ετι ἑςωτων,) they who cultivated the ground now turn fishermen. They fix upon a sort of bay, which they cut around with axes, making a kind of lake, leaving the ice however to remain toward the bank. Along the place cleared of ice they pass a large seine, which is enclosed in a strong rope. Then the fishermen and others standing on the bank, drag the net; and many, unacquainted with the business, look on merely for the pleasure of seeing the fish taken," &c.* This appears to us decisive and unanswerable. It will not be pretended that this river freezes over now twice in an age, and for the peasants of the country to be at the expense of procuring nets and all the apparatus for fishing in this way, would be just as idle and absurd, as for the inhabitants of South Caroli-

† De Nat. Animal. lib. xii. cap. 29.

na and Georgia to provide themselves with sleighs, skates, and snowshoes.*

* We have evidence also, scarcely less satisfactory, that the Tiber at Rome was commonly frozen over in the winter, from a superstitious custom with the ladies of bathing in the Tiber in the winter, *the ice being broken*, in obedience to the commands of the Egyptian priests.

> Hybernum fracta glacie descendet in amnem,
> Ter matutino Tiberi mergetur. Juv. Sat. vi. l. 521.

We have already seen, that the greatest cold that had occurred at Rome during four years, was 31°. Brydone gives 27° as the extreme cold at Rome, and 36° as that of Naples, for the winter of 1770. Mr. Webster says, that "this winter was perhaps colder than usual"—p. 10. He maintains, however, that such a degree of cold is "capable of covering large rivers with a thin coat of ice!"—p. 10. This is a very great error, and one which we were unable to account for, till upon more attentive examination, we found that Mr. Webster had mistaken *the mean of the greatest cold* in Dr. Holyoke's estimate for *the mean temperature of winter*. He says, "Dr. Holyoke gives us the mean of the greatest cold at Rome, deduced from several years' observations, within the last half century; which is 33°·46, a little above freezing point."—p. 10. Again he says on the same page, "If the mean temperature of the winter's cold at Rome is now about 33°, it is not more than eight degrees milder weather than in New England; for Dr. Holyoke found by seven years' observations, that the mean winter temperature at Salem, Mass. is 25°·74." Now Dr. Holyoke states in the very table above quoted, that the mean of the greatest cold at Salem, corresponding to 33°·46 at Rome, is 2°·42 below 0, making a difference of 35° instead of 8°. Also the mean winter temperature at Rome corresponding to 25°·74 at Salem is about 46°. Dr. Williams states the mean temperature of the coldest week at 42°, which Mr. Webster reduces 9 degrees in consequence of the above mistake. We apprehend, that this circumstance has been with Mr. Webster the occasion of an erroneous estimate of the present temperature of the winters in Italy; for he says, p. 11, "If the ordinary winter temperature at Rome is near the freezing point, we are at no loss to account for the snow and ice of Italy in ancient times." This supposed difference of 8° compared with Salem, would make the winters at Rome now agree exactly with those at Philadelphia. Did we believe, that this was the present state of the climate in Italy, we should be no less strenuous than Mr. Webster, against an amelioration having taken place.

That the extreme cold at Rome, indicated by 27°, is not sufficient to cover rivers with ice, is pretty evident from this, that in October with us, the thermometer is not unfrequently as low as 20°, and the mean of the greatest cold of this month is about 24°. Yet who ever saw our rivers covered with ice in October? The *mean* temperature of October exceeds

We now come to our own country, and we wish most heartily, that we had the means of demonstrating, that our winters are growing milder; that, as the asperity is wearing away from the face of the country, and the manners of the inhabitants, the rigor of the climate is also abating by kinder influences from the heavens; that, as we are clearing our forests and cultivating our minds, we are opening to ourselves more benignant skies, and may ere long invite and render indigenous the finest fruits and flowers of the most favored regions of Europe. But alas! we fear that the amelioration is so slow, if indeed there be any, that the present generation is but little interested in the inquiry, unless it be some consolation to dwell upon the prospect of more genial seasons, however remote. Yet it affords but little relief to him who is suffering with the cold, to be told that spring is approaching, especially if he is not destined to enjoy it.

by 2° or 3° that of January at Rome, but the mean temperature of April falls a little short of it. Yet our rivers of the size of the Tiber, are never known to be covered with ice during these months, and very rarely in November or March, except in the latter case by the cold preceding. Mr. Webster intimates, that we may be deceived by the observations at Rome, if they were made in the city, and says, "I found by numerous observations in New York, that ice, as thick as the glass in our windows, was uniformly made at a mile's distance from the city, when an accurate thermometer in the coldest positions *in* the city stood at 40°." Still we may compare one city with another by thermometrical observations made in each, and by means of these, the surrounding country. Now the winters at Rome are several degrees colder than those at Charleston, S. C. or even Savannah. Talk then to a South Carolinian or Georgian of the freezing over of their rivers, Ashley and Cooper for instance, or the Savannah, and they would think you were jesting. We judge of the winters at Savannah from observations at Midway, *thirty miles southwest* of Savannah, continued three years by the Rev. Dr. Holmes. These give for the mean of the greatest cold, about 25°. Mem. Am Acad. vol. iii. p. 308. The freezing over of Charles river at Cambridge, where it is just about as large as the Tiber at Rome, does not take place till December once in twenty years; and the mean time of freezing for the last forty years is the beginning of January.

The mean of the greatest cold, which we have used so often, is found by dividing the sum of the observations for several years, taking one observation for each year, and that the extreme one, by the number of years, and in the same manner for any particular month.

We have very little doubt, that our winters have undergone a change in several respects; that they are more open, attended with less snow, and with more frequent and sudden fluctuations of heat and cold, than they were formerly; but that they are on the whole more mild and temperate, is, we think, not very certain, though highly probable, from the evidence that we have been able to collect. A considerable change may have taken place, and yet be incapable of being rendered manifest, on account of the indefiniteness of the language from which our evidence is derived. We have not thermometrical observations, that extend back through a period sufficiently long to warrant any satisfactory conclusion one way or the other. We are obliged to depend upon general descriptions of the climate, and vague accounts of the quantity of snow, of the freezing of rivers and bays, &c. Some regard, we think, is to be paid to the popular belief on this subject, as a distinct source of evidence. It is difficult to account for an opinion, which has obtained so generally throughout the country, from its first settlement, without supposing it to have some foundation in fact. It certainly is not suggested by analogy, for we are accustomed to regard nature, as constant in all her operations. Nay there are considerations, which one would think would give our minds a contrary bias. We are always inclined to aggravate a present evil, and to depreciate a past one, that ventures to present itself as a rival. Every body believes his own troubles and vexations worse than his neighbour's and more intolerable than former ones of his own. There seems to be a propensity in most men to exaggerate the depravity and other evils of their own age, when compared with former ones, notwithstanding the many motives of a contrary tendency. The opinion then, that our winter's cold, notwithstanding its present uncomfortable severity, is more moderate, than that of former years, is an anomaly, not easily explained on the supposition, that it is destitute of proof, as a matter of fact. It may be said, that there are periodical changes of temperature from warmer to colder, and colder to warmer, which may have given rise to such an opinion. But how happens it, that the contrary opinion has never been started and maintained? Why

should so many in different parts of the country, without any communication, chance to catch the same hint, not only speculative men, who might show their ingenuity in supporting such an hypothesis, but plain observing men, who have been led by their occupation to mark the course of the seasons, and any remarkable changes in the weather; not only the people of the northern states, who might be predisposed to welcome such an opinion, but many in the southern parts of the country, who suffer more from the heat, than from the cold, and believing an increase of the former to accompany a diminution of the latter, they have an interest opposed to the hypothesis. Nor is the opinion in question of recent origin. It began to prevail soon after the settlement of the country, both here and in Canada. Hubbard, a man of learning and observation, in his history of New England, written about a century and a half ago, says, that "the temperature since the planting of the country by the English, is found more moderate by experience, and much more suitable for the constitution of the inhabitants."* The same belief prevailed among aged people in the middle states, as appears from the travels of Professor Kalm.† Charlevoix, who, at the commencement of the last century, had a good opportunity of observing the climate of Canada, and of collecting the opinions of others respecting it, and was very competent to judge upon this question, admits it, as an unquestionable fact, that the winters had become milder. Yet from his description of the climate, compared with the most recent accounts, it should seem, that an amelioration had taken place in the course of the last hundred years. He says, that "the winters always set in in a manner to astonish every one, who is not acquainted with them. The first frost fills in a few days the rivers with ice, and soon the earth is covered with snow, *which lasts six months*, and rises invariably to the height of six feet in places not exposed to the wind. One cannot go abroad, unless he is covered with fur like bears, without being frozen—icicles hang from the beards of horses a foot long—the bears themselves dare not show themselves in the open air *during six months.* "I have," says he, "never passed a win-

* Manuscript. † Travels, vol. i. p. 410.

ter in this country without seeing some one brought in with his legs or arms frozen."*

This account was written from Montreal, and every one recollects the plan of our Government to take this place last December, and that the failure was not, like that of another great expedition, ascribed to the hostility of the climate. Nay, the projectors had the means of knowing perfectly well, the time of the setting in of winter, and certainly would not have undertaken such an expedition, did the winter annually commence earlier than the middle of December. It seems moreover, that the ground was bare, and the rivers open till the last of November, and that the Canadians have prosecuted the war very successfully, during the month of December. This to be sure has taken place considerably south of Montreal; and lest some might object to an argument, which implies in the conductors of the war the ordinary wisdom and foresight of birds of passage, we will add, that it appears by thermometrical observations, made at Montreal and Michillimakkinak, that the winters in these places are not now more severe, than they are in the northern part of New England.†

We are told that at the first settlement of Philadelphia, the Delaware was commonly covered with ice about the middle of November, (26th new style;) that New York was much colder than Pennsylvania; that *the ice stood on the Hudson several months.*‡ A Dutch clergyman, who resided at Albany, and wrote in 1644, says, "the summer continues till all-saints day, (Nov. 1;) but then the winter sets in in the same manner as it commonly does in December, and freezes so much in one night, that the ice will bear a man. *The freezing com-*

* Nouvelle France, Tom. v. p. 242.

† The greatest cold at Montreal in the winter of 1792, which was several degrees colder than ordinary, was 20° below 0; the mean temperature of the winter 16·6°; greatest cold at Cambridge the same winter 11° below 0; mean temperature 25·2°. Greatest cold at Michillimakkinak in 1803, 24° below 0; mean temperature of winter 16·6°. The thermometer at Brunswick, District of Maine, in lat. 43° 53′, within the last seven years has been as low as 28° and 30° below 0; and the mean temperature of January for three years, viz. 1807, 1808, and 1812, the only observations we have, is 15·5°.—Mem. Am. Acad. vol. ii. p. 113, vol. iii. pp. 116, 120.

‡ Kalm's Travels, vol. i.

monty continues three months—sometimes there comes a warm and pleasant day, yet the thaw does not continue, but it freezes again till March, and then commonly the river begins to open, seldom in February."*

We are informed by a gentleman, who has been residing at West Point, for the last two years, that the steam boats continued to pass to Albany till the 10th of December, and that the river was open to Rhinebeck ten days later. Now the last December was about three degrees colder than ordinary, and the rivers this way were closed with ice about a fortnight earlier than usual. Indeed there was but one December, so cold as the last, or the last but one, during the twelve years preceding.† The ice broke up at Albany on the tenth of March of the last year, having continued just three months, the period during which it was formerly frozen. But it should be recollected, that the last March was one of the four most remarkable, in point of cold, that have occurred for the last twenty four years. The mean state of the thermometer was nearly 6° below the mean temperature of the month,‡ and the rivers in the neighbourhood of Boston, continued to be covered with ice three or four weeks later than usual. Yet during this winter, which commenced so early and continued so long, the freezing of the Hudson at Albany only answers to the description of ordinary winters in former times.

Wood, in his New England's prospect, written soon after the settlement of the country, speaks of northwest winds as "commanding every man to his house, forbidding any to outface him without prejudice to their noses." "It may be objected," says he, "that it is too cold a country for our Englishmen, who have been accustomed to a warmer climate; to which it may be answered, *Igne levatur hyems*—Moreover the extremity of this cold weather lasteth but for two months or ten weeks, beginning in December, and breaking up the tenth day of February, (21st new style) which hath become a passage very remarkable, that *for ten or a dozen years the weather hath held himself to his day*, unlocking his icy bays and rivers,

* We quote this from Mr. Webster, who refers to Hazard's Collections, vol. i. p. 517.

† See Mem. Am. Acad. vol. iii. p. 380. ‡ Ib.

which are never frozen again the same year, except there be some small frost, until the middle of March." This account is confirmed by Governor Winthrop. He writes, Feb. 10th (21st new style) "The frost broke up, and after that, though we had many storms and sharp frosts, yet they continued not, neither were the waters frozen up as before. And *it hath been observed, ever since this bay was planted by the English, viz. seven years, that at this day the frost hath broken up every year.*"*

Here is sufficient evidence, we think, of two important facts, first that Boston bay was generally frozen over in the winter to a greater or less extent, and secondly, that the breaking up of the ice was a regular event, which took place about the 21st of February. Mr. Webster undertakes to show, that this breaking up of the ice could not relate to Boston Bay and Charles River at Charlestown. He quotes Gov. Winthrop as saying Jan. 3d, new style, "three of the Governor's servants, coming in a shallop from Mystick, were driven by the wind upon Noddle's island."† Again on the 6th of Jan. "The rivers are frozen up, and they of Charlestown could not come to the sermon at Boston, till the afternoon at high water."‡ "By this we are to understand," says Mr. Webster, "that Charles River at the ferry was full of ice, which was removed by the flood tide, so that the river was passable in boats. "On the 8th of Jan. seven persons," says the Governor, set sail in a shallop from Boston for Plymouth, and were cast away on Cape Cod. Boston harbor and bay then must have been open."§ It is also stated in this same account, that "some had their legs frozen into the ice, so as they were forced to be cut out." Of those who escaped to shore, four afterwards died in consequence of the cold; and the boat was detained above six weeks at Plymouth, probably on account of the ice, as this would bring it to the usual time of its breaking up. Mr. Webster appears to consider the following statement as decisive in favor of his construction.

"On the 5th of Feb. O. S. [the 16th] arrived the ship Lyon, at Nantasket. On the 8th [the 19th] the Governor went aboard the

* Journal, p. 23. † p. 21. ‡ Ib. § p. 36.

Lyon, then lying by Long-Island. On the 9th [20th] the Lyon came to anchor before Boston. On the 10th, O. S. [21st] says Governor Winthrop, 'the frost broke up, and after that, though we had many storms and sharp frosts, yet they continued not, neither were the waters frozen up as before.'

"This evidence is decisive to prove, that the breaking up of the ice was not said of the ice in Boston harbor; for the Governor went down to the ship Lyon, at Long Island, which is almost five miles from the town, and the ship came to anchor before Boston, *before the ice broke up.*" p. 36.

Mr. Webster does not quote the Governor quite fairly. "The Lyon came to anchor *before* Boston." Here Mr. Webster stops—the Governor goes on to say, "*where she rode very well notwithstanding the great drift of ice.*" Instead of being at a wharf, or if no wharf had been built, close in ashore, she rode at anchor *before* Boston. Pray why did she lie off in the current, exposed to *a great drift of ice*, if she could have come up close to the town, where there would have been no danger from floating ice? Indeed it is not necessary to suppose that the *whole* bay was frozen over every year, in order to refer the breaking up of the ice before spoken of, to this place. The passing of the Governor's servants to Noddle's island, from Mystick, (which Mr. Webster supposes by mistake to be on Charles River;) and of the Governor himself to Long Island, may prove only, that a channel was open through the harbor, and that branch of the bay which leads to Mistick. The Governor speaks repeatedly of boats being obstructed by ice in passing to the islands. "In the end of this month," (January) says he, "three men had their boat frozen up at Bird's Island, as they were coming from Deer Island, so as they were compelled to lodge there all night, and in the morning they came over the ice to Noddle's island, and thence to Malten's point in Charlestown, and thence over the ice to Mr. Hoffe's to Boston. At the same time six others were kept a week at the Governor's garden," (on one of the islands in the harbor,) "and in the end got with their boat to Mattahan point; for near all that time there was no open place between the garden and Boston, neither was there any passage at Charlestown for two or three days, the wind about the N. W. three weeks, with

much snow and extreme frost."* Again he says, December 4, (15th N. S.) "An extraordinary tempest of wind and snow at N. N. E. which continued 24 hours, and after that such frost, as within two days the whole bay was frozen over, but free again before night." We make these quotations not only as evidence of the degree of cold that occurred in the course of a few years, but also to show, that it was customary for boats to pass to the islands in the harbor, when part of it was frozen over. Indeed it is evident, we think, from the very language of Governor Winthrop, that by the breaking up of the frost, he must mean the ice in Boston harbor and Charles River. "On the 9th Feb. the Lyon came to anchor before Boston, where she rode very well, notwithstanding the great drift of ice. 10th the frost broke up, and after that, though we had many storms and sharp frosts, yet they continued not, neither were *the waters* frozen up, as before." This is a continued narrative. Could he mean by the breaking up of the frost, that of the small rivers in the interior of the country, which at that time was very little explored? The Governor resided at Boston. How should he know, when the small rivers in the country were cleared of ice, or why should it be noticed and faithfully handed down, any more than it is now. This breaking up of the frost is mentioned, as a remarkable event, so much so, that the very day of its taking place each year for seven years is remembered, or had been carefully recorded. It is difficult to account for so much importance being attached to it, or even for its being regarded at all, unless it related to such waters as the harbor and large branches of the bay about Boston. Besides we have evidence from another source, which seems to confirm this interpretation. We are told, that in 1696, the French from Canada meditated an expedition against Boston. But it is remarked, that "the gaining of Boston would not have enabled them to have possessed even the rest of that province, nor without a very great land army could they have held the possession of Boston alone *one winter* against so great a number of inhabitants, as were then in the province."† We are led to infer from this, that the waters be-

* Journal, p. 97. † Hutchinson, p. 101, 2d ed.

tween the peninsula and the main land were commonly frozen over, so as to admit of persons passing over on the ice; an event, that has occurred now but a few times within the memory of the oldest inhabitants, and when it has occurred, the ice on the other side of the town has covered the harbor to a greater or less extent. It is very well known, that at the present day, the freezing over of the bay about Boston to such a degree, as to make the breaking up of the ice an event of any consequence, does not take place once in ten years. And as to the regularity of this phenomenon, so emphatically stated both by Wood and Winthrop, it is needless to observe, that nothing of the kind is now known, either in our bays or rivers, great or small. We know however, that this regularity is still observed in other countries, that are colder than ours. The setting in and breaking up of winter in the colder parts of Canada and Russia, and particularly the breaking up of the ice in the Baltic, are almost as regular as the changes of the moon.

In the course of fourteen years, the period embraced by Governor Winthrop's Journal, there is particular mention of the whole harbor's being frozen over several times, without any thing being said to mark the occurrence, as very extraordinary. He gives an account indeed of one winter, that of 1641, as very remarkable for its severity.

"The frost was so great and continual this winter, that all the bay was frozen over, so much and so long, as the like, by the Indians' relation, had not been these 40 years, and it continued from the 18th of this month (Jan.), to the 21st of the 12th month (Feb.); so as horses and carts went over in many places where ships have sailed. Capt. Gibons and his wife with divers on foot by them, came riding from his farm at Pullen point, right over to Boston the 17th of the 12th month, when it had thawed so much as the water was above the ice half a foot in some places; and they passed with loads of wood and six oxen from Muddy river to Boston, and when it thawed it removed great rocks of above a ton or more weight, and brought them on shore. The snow likewise was very deep, especially northward about Acomenticus above three feet, and

much more beyond. It was frozen also to sea so far as one could well discern.

To the southward also the frost was as great and the snow as deep, and at Virginia itself the great bay was much of it frozen over, and all their great rivers, so as they lost much cattle for want of hay, and most of the swine."*

We are told that "the winter of 1696 was *as* cold, as had been known from the first arrival of the English, sleighs and loaded sleds passing *great part of the time* upon the ice from Boston as far as Nantasket."†

The first of these accounts Mr. Webster considers, as amounting to a demonstration against the supposition of a change of climate. We are unable to perceive any such evidence. It is admitted to be an extreme winter, and it is evident from the description, that it was an uncommon thing for horses and teams to pass on the ice over the deep waters of the bay; but is it manifest, that the ice did not usually extend farther into the bay then, than it does now? This is certain, that at this time the ice extended as far as the eye could reach, and continued *more than four weeks*, and "by the Indians' relation" it was the most remarkable winter, that had happened for forty years; and fifty five years afterwards, we have an account of another, in which loaded sleds, &c. passed *most of the time* to Nantasket, about 10 miles. Now we will venture to say that no winter of such continued severity, as either of these, has happened for the last seventy years. The harbor indeed has been frozen over several times, so as to support horses and sleighs, but it has lasted only for a short time. The continuance of such a body of ice for a month is a phenomenon, not within the recollection, we believe, of any person now living. All this, we confess, does not amount to much, in proof that our winters have become more temperate, but it certainly does not go to prove the contrary hypothesis.

It has already been mentioned, that the Delaware and the Hudson used to be covered with ice "several months"—the Hudson at Albany "three months." Wood also, as before quoted, says, "the extremity of this cold weather lasteth but

* Journal, p. 240. † Hutchinson's Hist. p. 101.

for *two months or ten weeks;*" alluding to the freezing up of the rivers and bays. We mention these in connexion, to show that as New England is considerably colder than New York or Philadelphia, the language of Wood probably relates to the mouths of large rivers, and bays of considerable size. Indeed it can relate to nothing else, unless our winters have grown colder, which we suppose will not be pretended by any; for our inland waters are seldom cleared of ice till some time in March. Charles river at Cambridge is generally closed, till the beginning of this month. The mean time of its principal breaking up for the last thirty years is the 3d of March, and the mean time of its first freezing over is the 3d of January.*

The cause, which is supposed to operate in producing the change, for which we contend, is such, that the amelioration, if there be any, is to be looked for principally in the prolongation of autumn, and the mitigation of the first part of winter; and we have remarked, that the evidence in support of our hypothesis,

* For this valuable piece of information, we are indebted to a manuscript journal of the Hon. William Winthrop Esq. in which we observe only one instance of the river's being covered with ice in November, and this on the 29th. It appears also, that during the last winter, the only one in which we are able to make a comparison, the ice continued several days longer on the Charles, at Cambridge, than on the Hudson at Albany, which, it may be presumed, is generally the case, as the latter is much deeper, four or five times wider, and exposed also to some tide. Yet we have very good authority to show, that the Hudson at Albany was generally covered with ice three months in former times.

The following may be worth preserving for the facts it contains, whether it add to the argument or not. Hubbard, before quoted, who resided at Ipswich, Mass. says, "the frost commonly begins to take possession of the earth about the middle of November, forbidding the husbandman to meddle therewith any more, till the middle or end of March. Sometimes it be the middle of May (26th N. S.) before the fruit trees be blossomed, or the fallowed ground of the fields be willing to receive its portion of seed." Manuscript. It is certainly now not an unusual thing for farmers in the neighbourhood of Boston, to be plowing and weeding their corn fields, at the time of the annual election, and it is very rare indeed, that fruit trees do not put forth their blossoms before the last of May. The mean time of the blossoming of peach trees at Andover, Mass. for the twelve years preceding 1808, was the 4th of May, and the latest was the 19th. Yet it is a common observation, that of late our springs have been more backward, than usual.

which is drawn from the commencement of winter, is much stronger, than that which is taken from the opening of spring. We have abundant evidence, that formerly the navigation of the large rivers began to be interrupted by ice in November. "On the 16th of November," says Kalm, at Albany, not a degree north of Cambridge, "the yachts are all put up."* The mildness and pleasantness of our Novembers now, and the holding off of winter, as it is called, are the subject of common remark.

We have already dwelt so long upon the historical evidence, relating to the hypothesis of an amelioration of climate, that we can add but little to what we have said upon the physical causes, that may be supposed to have an agency in producing the change supposed. We have shown, how the clearing and cultivation of a country is calculated to effect its temperature. It may be objected, that as those parts of Europe, which we have been considering, were as populous in ancient times, as they are now, the cause here assigned can hardly be considered as applicable. Still it cannot be denied, that the people in modern times, particularly in Germany and the colder countries, live more by agriculture, than they did formerly; that immense forests have been extirpated; that clearing and cultivation has been carried farther into the northern parts of Europe, which by means of winds have an important influence upon the climate of the more southern regions of the continent. The excess of the cold in America above that of the same latitudes in Europe, besides what may arise from immense tracts of uncultivated land, is ascribed to several causes. One is, the extending of this continent toward the north pole to a greater degree, than that of Europe, whereby, for the reason before given, the atmosphere in the high latitudes is much colder than it would be, if those places were occupied by water, instead of earth;† and this cold atmosphere, after traversing an extent of

* Travels, vol. ii. p. 93.

† We could produce numerous and unquestionable authorities to shew, that remote from land, the waters in the neighbourhood of the pole are free from ice. Several European navigators have proceeded within a degree of the pole, and one or two, it is said, have sailed even to it, who re-

many hundreds of miles, and paving a passage with snow and ice to preserve its temperature, often visits us in winter under the name of a north-west wind. Another cause is the greater breadth, from sea to sea, of the northern parts of this continent, compared with Italy, Spain, Great Britain, &c. and the almost unbroken range of high mountains, on account of which we derive very little benefit from the reservoir of heat in the Pacific ocean. Another circumstance, affecting our climate, is our easterly situation. We have happened to fix ourselves down on the cold side of the continent. To compare the difference of temperature between the eastern and western coast of North America, to that between the northern and southern side of a house on a clear, sunny, winter's day, with the wind at north-west, will give but a feeble idea of the advantage, that our western brethren have over us in point of climate.* This is owing to the prevalence of westerly winds in winter.† Were

late, that "the weather is as warm, as at Amsterdam—and that the sea is perfectly free from ice—and rolling like the bay of Biscay; insomuch," says Whitehurst, "that no doubt can remain of the high seas under the pole being open at all times, and fit for navigation, though much incumbered with ice in lower latitudes." Whitehurst on the state of the earth, pp. 141, 142.

* It appears by the accounts of those, who have been upon the north-west coast of North America, that there is seldom any frost till January; that vegetation at Nootka Sound, lat. 49°, is in great forwardness in April. According to Capt. Magee, of Boston, who passed a winter at this place, there is little snow in the neighbouring region, and the spring appears about 30 days sooner than in Massachusetts. Williamson on climate, p. 14.

† In Philadelphia the westerly winds are to the easterly in winter nearly, as 8 to 1, and through the year as 3 to 1. At Cambridge they are in winter nearly, as 7 to 1, and in summer, as 3 to 2. In different parts of Europe, the easterly and westerly winds are, as 2 to 1, 3 to 2, 4 to 3, 5 to 2, &c. With us on the eastern coast of America, the west winds coming over land, are the cold winds in winter, and warm winds in summer. The reverse is the case on the western side of this continent, and in Europe.

New England is 28° colder in winter, and 8° warmer in summer, than those parts of Europe, which lie in the same latitude. Mem. Am. Acad. vol. ii. p. 67.

China is situated like the United States, and we are informed, that "in the north part of China, though in a latitude not more northern than Italy, the cold feels very sharp, and the great rivers and lakes are frozen.—In

our winds principally from the east at this season, the severity of our winters would, in all probability, immediately disappear. These, we think, are the principal causes to which the excessive cold in our country is to be attributed; and, although our climate may continue to improve and experience all the change, of which we have evidence in older countries; yet, as most of the causes, above enumerated, are not liable to be done away or materially affected by human industry or the lapse of time, we are constrained to believe, that we are not destined to enjoy in New England the mild winters of the corresponding latitudes of Europe.

We have been drawn a little wide of our subject. We return, to say a few words respecting the permanency of the direct source of heat, and of that condition of our globe, which gives rise to the variety of the seasons, and which has furnished Mr. Webster with a philosophical objection to our position. He says,

"It appears to me extremely unphilosophical to suppose any considerable change in the annual heat or cold of a particular country. We have no reason to suppose that the inclination of the earth's axis to the plane of its orbit has ever been varied; but strong evidence to the contrary. If this inclination has always been the same, it follows that the quantity of the solar rays, falling annually on a particular country, must have always been the same. Should these data be admitted, we are led to conclude that the general temperature of every climate, from the creation to this day, has been the same, subject only to small annual variations, from the positions of the planets in regard to the earth, or the operations of the element of fire in the globe and its atmosphere." p. 42.

Japan, which extends from 31° to 39° N. they have a cold, snowy, wet winter." Vasennius' Geog. pp. 609, 611. 4th ed.

On the east side of Norway, the winter's cold generally sets in about the middle of October, and continues to the middle of April; the waters are frozen to a thick ice, and the mountains and vallies are covered with snow. Yet on the western side, in the same parallel of latitude, the air indeed is misty and cloudy, but frost is seldom known to last longer than a fortnight or three weeks. Whitehurst on the state of the earth, p. 138. 3d ed.

The severity of our winters has often been ascribed to our large lakes. But what makes the lakes so cold? It is probable that these inland seas, like all other large bodies of water, have rather a favorable influence, than otherwise.

The obliquity of the ecliptic, on which depend the difference in length of the days, and the annual vicissitude of temperature, it is notorious, is not permanent; nor is the variation too insignificant to be worth regarding. The diminution since the time of Eratosthenes, 230 years before Christ, amounts to about 24′, more than one sixtieth of the whole quantity. This has increased the length of our shortest days, and diminished the length of the longest about three minutes, and of course made the difference between the day and the night at the solstices six minutes less. Now the temperature of any place or season depends very materially upon the *duration* of the action of the sun's rays, compared with the interval of his absence. The sun's rays fall upon the earth here, in latitude 42°, more scattered, than they would do, if the sun was directly over our heads; also, more of them are obstructed by passing through a greater extent of atmosphere. Yet in summer, on account of our days being four hours longer, we have as warm weather, as they have, where the sun is vertical. Indeed, owing to the cause mentioned, the protracted influence of the sun's rays, notwithstanding their comparative paucity from greater obstruction and obliquity of incidence, the extreme heat, in high latitudes, is greater than at the equator. Besides, 2000 years ago, the sun had arrived at his present extreme southern declination, nine days before the winter solstice. There were therefore eighteen days, during which he was farther south, than he ever proceeds now, bringing into operation to a greater degree during all this time those causes, which make the difference between summer and winter. This effect, it may be thought, is in a degree counteracted by the diminution of the eccentricity of the earth's orbit, whereby the earth, moving more nearly in a circle, recedes farther from the sun in January, and approaches nearer to him in July, both which effects are now somewhat increased by the relative motion of the apsides, with respect to the equinoxes. Still the combined result at present is altogether lost in the immensity of the sun's distance.*

* It is well known, that the earth, on account of the form of its orbit, is much nearer the sun sometimes, than at others; and it so happens, that we, in the northern hemisphere, enjoy whatever benefit arises from this ap-

We do not know, that astronomy makes us acquainted with any other causes, that have the slightest claim to be considered, as involved in the question before us. Dr. Herschel, indeed, supposes a variable emission of heat from the sun, on account of the more or less copious supply of gaseous fuel, as, he thinks, is indicated by the solar spots. But this is one of those romantic notions of the Doctor's, which are apt to intrude themselves into the detail of his most splendid observations, and which, like these very spots, though not without an interest, derived from their connexion, unfortunately impair the brilliancy of his discoveries. Yet it is not strange perhaps, that a man, who has ventured to such a dizzy height, should have his brain turn a little, and betray the symptoms of a vertigo. But certainly no man has less occasion to resort to invention, or better reason to be contented with what he has seen.

Geology, we think, has even less to do in this case, than astronomy. The hypothesis of a *central fire*, to which Mr. Webster seems to allude, appears to be supported by evidence hardly sufficient to entitle it to a serious notice. It may be deemed a satisfactory refutation, that amidst the numberless projects, prompted by curiosity or cupidity, with little prospect of gratification or gain, such as the search for the philosopher's stone,

proximation to the fountain of heat at the time, when we most want it, namely in winter. The eccentricity, on which this depends, has suffered a diminution in the course of the last 2000 years, which removes the point of nearest approach to the sun about fourteen thousand miles. Also this point, the perihelion, is shifting forward, while that of the solstice is moving backward, from which results a relative motion asunder of a little more than a minute of a degree in a year. At the commencement of the Christian era the earth passed this point about the 2d of December, toward the close of the thirteenth century it passed it at the time of the solstice, 21st of December; it now passes it about the first of January, and after the lapse of little more than 10,000 years it will pass it at the summer solstice, 21st of June, and we shall be brought nearer to the sun in summer, and carried farther from him in winter, by more than three millions of miles. The diminution of the eccentricity of the earth's orbit, as well as that of the obliquity of the ecliptic, are temporary and limited effects; they cannot continue, till the ecliptic becomes a circle, and the seasons are annihilated. They are parts of regular periodical changes.

the elixir of life, and perpetual motion, there has been no attempt to put this hypothesis to the test, notwithstanding the immense rewards held out by an enterprize, which, if successful, would fairly eclipse the glory of Prometheus. If there were this vast reservoir of the ethereal element laid up in the bowels of the earth, it would certainly be worth digging for, and the ingenuity and sharpsightedness of our countrymen, exposed to such extreme cold, with the more powerful stimulus of interest, could hardly fail of inventing some means of getting at it, especially in these distressing times, when other resources are cut off, and they have so little to do with their time and money. If there be any rational foundation for this opinion, we shall certainly hear soon of a patent being obtained, securing to A. B. & co. the exclusive right to the central fire, with the privilege of furnishing the northern and middle states with this very useful article; and of a corporation in Boston proposing to supply the inhabitants of the town with heat, as they are now supplied with water, accommodating them with a temperature of 80°, 90°, or 100°, according to their liking, at so much per annum, and offering to sell out perpetual summer by the acre, to gentlemen in the country, who can afford it, and have a fancy for a tropical climate. But this idea, that the earth is a great stove, designed to keep our feet warm, and for this purpose kept full of coals, no body knows how, with here and there a funnel through a volcanic mountain to carry off the smoke, though very kindly conceived, derives, we believe, as little support from fact, as from philosophy.

It is true, there are masses of ignited coal, volcanoes, guysers, and hot springs in various parts of the earth, that abundantly prove the existence of subterranean heat. But we have equal proof also of the existence of subterranean water, and quite as good reason, to say the least, to conclude, that the interior central parts of the earth are composed of this fluid, as of the former. The two hypotheses, however, would not consist very well together, and it is difficult to say, which is the most probable. It may be said, that beside the high degree of local heat, indicated by the phenomena above mentioned, we have evidence of a more moderate temperature at various

depths in all parts of the earth. But this temperature is found also to correspond with that at the surface, not only in degree, when the mean is taken, but also, if the depth do not exceed sixty or eighty feet, in the principal variation to which it is subject; which shows, that it is from above, and not from below, and that it has a common origin with that at the surface.* This by the way suggests to us an explanation of a phenomenon, already remarked, in the change which our winters are supposed to have undergone. By clearing and cultivation the

* The greatest direct diurnal influence of the sun is at noon, but the warmest part of the day is generally about 2 o'clock, and the coldest a little before sunrise. The direct annual influence of the sun is greatest on the 21st of June, and least on the 21st of December, but the greatest heat of summer is about the last of July, and the coldest part of winter is about the last week in January. The diurnal variation of temperature, so great at the surface of the earth, is not to be perceived at the depth of a few feet, although here there is a slow and gradual variation of heat, that becomes perceptible at intervals of a month. At the depth of thirty or forty feet the change is still slower, and more inconsiderable, although even at this distance from the surface, there is to be observed a small annual variation, and the time of midsummer, or greatest degree of heat, is ordinarily about the last of October, and that of midwinter, or greatest degree of cold, is about the last of April. These times however are liable to vary a month or more, according as the power of the earth to conduct heat is increased by unusual moisture, or diminished by dryness. But at the depth of eighty feet, the most sensible thermometer is scarcely competent to discover any change throughout the year. See Trans. of the Royal Irish Acad. for 1788. p. 148. The temperature at the depths of 30 and 40 feet is found to vary with the latitude, and to agree at a mean with that at the surface. Williams' Vermont, vol. i. p. 54. In the cave of the Observatory at Paris, which is 170 feet deep, the thermometer always stands at the same height, 54½° Fah. The mean temperature at the surface is fixed at 52°·74. The heat at so great a depth as 170 feet may be increased by the condensation of the air. There are some exceptions to the general law, as here laid down, in mines and caves, which may be referred to causes purely local.

Some eminent philosophers have attempted, by fixing the point of absolute cold, or the real zero of a natural scale of temperature, as low as 1000°, or more, below the freezing point of water, to show, that the annual variation of the solar heat bears a very small proportion to the absolute quantity in the earth, and that consequently there must be some other source of heat beside the sun. But this reasoning, though very ingenious, is obviously built upon an hypothesis.

rays of the sun are admitted more effectually to the earth. The heat becomes more intense at the surface, and penetrates to a greater depth. Of course, beside the greater direct influence of the sun in winter, as before shown, a greater quantity of heat is deposited in the earth during summer. As the sun withdraws to the south, this heat, from its natural tendency to an equilibrium, begins to flow out, or rather to diffuse itself upward as well as downward. It continues to flow out more or less, until by the return of the sun, the surface of the earth becomes warmer than the contiguous stratum below. These considerations would lead us to look for an amelioration in autumn, as well as in winter, but little comparatively from this source in the latter part of winter, and still less in spring. All this supposes, not that we have hotter days than our ancestors, but that the summer half of the year is, on the whole, warmer, than it was formerly, which, we think, is evident from the notorious fact, that the east winds prevail more, and extend farther into the interior, than they used to do. So far as these are felt, they produce a counteracting effect, but they are still very limited. The observations of Dr. Williams make a difference of 10° in the temperature of the ground, ten inches below the surface in an open field, and in a wood, in the months of June, July, and August. Before and after these months the difference was less, and according to this statement there was none in November.* But we know that in the colder months the snow and frost continue longer in a wood, than in the open field.

So far then as we are able to apply established principles to the subject before us, the result appears to correspond with the opinion, which has prevailed so generally and so long, and which has been in most cases formed from observation and experience, independently of any bias from philosophical considerations. In addition to this, we may avail ourselves, in regard to this country, of all the evidence that has been produced, in favor of a change of climate in Europe. If it is a fact, as we think it undeniably is, that a change, a manifest and important change, has taken place in those quarters of the globe,

* History of Vermont, vol. i. p. 74. 2d ed.

that have been long inhabited, and that this change is to be ascribed to alterations in the face of the country, made by human industry; the same causes here must inevitably produce the same effects; and, although the change at present be not so certain and conspicuous, as we could wish, it is perhaps on the whole as apparent and considerable, as the nature of the evidence, and the relative age of the country would lead us to expect.*

* Since sending the above to the press, we have been favored with the following additional information, respecting the climate of modern Italy, from a gentleman, Joseph G. Cogswell Esq. who visited every part of the country during the winter of 1809—10, which, he understood, was not milder than usual, and made inquiries particularly, with a view to satisfy himself upon the question we have been considering. He says, "The cattle are never stalled in any of the plains of Italy, the barns or stables are used exclusively for horses. The great plain of Lombardy, which extends from the foot of the Alps to the gulf of Venice, between 44° and 46° N. lat. is open the whole year for grazing, and affords in all seasons sufficient grass for the support of beasts. Light snows are not unfrequent, but they never resist the influence of a meridian sun. The large rivers do not certainly freeze over in any part of Italy, nor even the rivulets south of Tuscany. The roads do not freeze, nor the public reservoirs of water at the fountains, in any of the cities, even as far north as Turin. Fires, except for cooking, are but rarely made in Rome, perhaps six or eight days in the winter, and then only by the opulent. At this day oranges come to perfection, and flourish greatly on the islands in lake Major, in the Milanese territory, in lat. 46° N. In favorable situations in the vicinity of Naples, green peas are furnished for the table in common winters, by the end of February, without artificial heat."

OBITUARY.

DIED AT BOSTON, SEPTEMBER 28, 1813, MR. CHARLES ELIOT, AGED 22, ELDEST SON OF SAMUEL ELIOT, ESQ.

THERE are few events in private life, more adapted to excite public sympathy, than the death of such a young man as Mr. Eliot. He was just entering into life. He had just appeared in that profession to which he had devoted himself. There was every thing in his principles and dispositions, and every thing in his talents and learning, to give the promise of future usefulness to the world; and every thing in his sincerity, openness, and warmth of feeling, to endear him to his friends. It was at the very time when all their expectations concerning him seemed about to be fulfilled, that these expectations were forever destroyed. It was appointed them to see the lingering waste of his health, to watch the changes of disease, to hope when reason gave no hope, to endeavour to learn from him acquiescence and piety, and at last to feel that shock of separation, for which there is nothing can fully prepare us. Such an event is among the most severe and awful lessons, by which God teaches us the value of those hopes that respect eternity.

If his life had been continued, there are few probably who would have possessed greater power of doing good, and none who would have felt more strongly the obligation to employ this power to the utmost. His notions of duty were far too high and correct, for him ever to have considered the gifts of nature or of fortune as the means of selfish indulgence. With an ardor that would have increased with his opportunities for exertion, he often expressed his desire of usefulness—his wish to be one of those by whom society is enlightened and made better. He had spent much time in the study of the Scriptures, and he would have employed his talents and learning in the promotion of that correct knowledge of Christianity, to whose advancement we must principally look for any great improvement in the virtue and happiness of mankind. He would have been one of those, by whom the purity of public

morals is preserved, who are sensible to all the causes by which it is affected, and who are anxious to prevent its corruption. He had joined that profession in which is to be found a large part of the literary men of New England; and he too, with something of the pride of patriotism, and with a strong interest in the pursuit, would have endeavoured by all the means in his power, whether by his own exertions, or by assisting those of others, to increase the literature and science of our country. If he had lived to take that station for which he seemed to be destined, he would have been one of those, who give its character to society; who guide and direct public opinion and feeling; and whose influence on the moral and intellectual condition of others, is felt far beyond the sphere in which they are personally known.

There is a particular propriety in this notice of Mr. Eliot appearing in the present work; for to him this work is indebted in a great degree for its existence, and for much of its value. At its commencement, the present writer, who was then its editor, received from him continual assistance, such as he could expect from no one else; and without which it would have been most difficult for him to have succeeded in the undertaking. There was no office of friendship which he was not solicitous to perform. His first compositions for the public appeared in this work; and he was induced to risk thus early the hazard of public criticism, principally by the wish to render the labor of a friend less irksome. During his residence at Cambridge as a theological student, he was interested in every thing where it was in his power to serve the cause of religion or literature. I will only mention, that he was a principal means in the forming of that plan of study for theological students, whose advantages have since been experienced;* and that he was particularly interested in suggesting and promoting the plan of the Cambridge edition of that invaluable work, Schleusner's Lexicon, the publication of which will soon commence. The prospectus of it, which has been circulated through the country, was principally prepared by him. I speak of the promise and commencement of usefulness in one, to

* See Repository, vol. i. p. 209.

whom the opportunities for doing extensive good, which he might hereafter have enjoyed, had not yet been afforded.

The disease of which Mr. Eliot died was lingering, and the chance of recovery was gone, long before its termination. There are few spectacles of higher moral sublimity, than to see one, to whom the future had promised so much, calmly and without perturbation waiting the slow approach of death, with a knowledge of its certainty, and with a full apprehension of all that we can know of its nature. This was done by Mr. Eliot. From the flattering appearances in the commencement of his disease, it was some time before either his friends or himself were led to fear that its termination would be fatal. When at last an unfavorable change took place, and in compliance with his constant desire, he was informed of his situation, the first wish that he expressed to the friend who conversed with him, was, that a knowledge of his danger, if it were not known to them already, might be kept from his other friends as long as possible. During the remainder of his sickness he repeatedly expressed his habitual faith. He spake as he had done in health, of his trust in the providence and mercy of God, and of his belief of the high destination of those who endeavour to fulfil the purposes of their existence. It produced a feeling almost of cheerfulness to hear him talk of death, and of his hope of meeting again the friends who had gone before him from this world. The efficacy of his religious faith gave him mental strength in that state of bodily weakness and disease, which renders us sensible to the slightest impressions. He expressed those feelings which are produced only by correct notions of Christianity, having their full operation in a comprehensive and intelligent mind

In speaking of meeting again those whom he had known on earth, he mentioned the name of Mr. Buckminster. It is now a second time since the commencement of this work, that I have been called to record the death of one with whom I was then particularly connected; with whom I had a more than common agreement of opinion and sympathy of feeling; and whose loss has been attended with such circumstances of a public and private nature, as to make it most deeply felt. To me

the retrospect is very solemn and affecting. In returning to my usual studies and pursuits, I cannot but feel something of solitude and desertion. But it is no common privilege to have known such men; to have been honored with the regard of one of them, and to have been most intimately connected with the other. To me Mr. Eliot was a friend most warm, most sincere, and most disinterested. I may be permitted to pay this tribute to the dead, and to claim this high honor to myself. With his name I wish my own to be always connected. The hopes and affections that clung round him, with the thought of whom almost every feeling was associated, have been torn from their support. But it is past: I endeavour to think of him as one with whom I am hereafter again to be united; and any thing in life would be a poor exchange for this expectation.

SKETCHES OF THE HISTORY OF ANCIENT POETRY.

We find that from a very early period there has been a very intimate connexion preserved between poetry and verse: and so closely are they associated in our thoughts, and confounded together in our modes of speaking, that, in general, every thing in verse is called poetry, and every writer of verses is called a poet. For this confounding of things that are distinct, and allied only by accident, I intend here no vindication nor apology. Though poetry is generally dressed in the garb of verse, and thus rendered more beautiful and captivating, scarce any thing is easier, for one who can distinguish sounds, or ascertain the rules of quantity and accent from books, than to frame verses altogether exact in prosody, that have nothing of vigor or poetic fire. A proposition in geometry may be forced into measured lines; from that we may pass to the mere common place of ordinary prose, and cast this also in the mould of verse. But still all is out of proportion; the feet may appear sound, though they are likely to be swollen, and at best support a body feeble and impotent.

It is certain there were many miserable versifiers, before

and during the age of Horace. But he seems unwilling to allow that they were in any way tolerated:

> Mediocribus esse poetis
> Non homines, non dî, non concessêre columnæ.

Divested of its poetical hyperbole, this sentiment of Horace has passed into a general maxim; yet we are still obliged to read many verses that do not rise above mediocrity. And, if I may use a cant term, there are many *prosers* in verse, who write on in spite of nature and the nine, *determined* to be thought in favor with the muses:

> "Just as a blockhead rubs his thoughtless skull,
> And thanks his stars he was not born a fool."

Extensive as the term poetry may be, it still has its limits: but in ascertaining them, the power of definition fails. Hence some have had recourse to diminutives and terms of contempt for inferior versifiers, and gratuitous but unsuccessful laborers in the supposed service of the muses. As there are poets, so also there are poetasters, and among each likewise we find a variety of gradations. Nothing appears to have perplexed critics more, than a search after a definition of poetry. It has been called τεχνη μιμητικη, an imitative art. This indeed is true in respect to many kinds of poetry, though questionable in its application to all. But it is not sufficiently appropriate, full, and distinctive in regard to any species. It applies also as well to other arts, as to that of poetry; and is so general at the same time, that it does not adequately describe the province and extent of the art, which it is intended to embrace. Others have defined poetry to be the art of expressing our thoughts by fiction. While the first is too general, this, on the other hand, in the sense in which fiction is commonly understood, is too exclusive. If by fiction are intended all those metaphors, and allegories, and comparisons, and allusions, and especially those personifications of moral subjects, which give peculiar life and animation, and add so much of ornament and of the charm of novelty to what would otherwise be dull, and naked, and trite, much indeed is included, which is necessary in order fairly to deserve and secure the name of poet. All this in fact may be

so immoderately used, and may be accompanied with such a kind of diction, even by the orator, that he may trespass on the poet's ground, before he is aware. Original and native poetry has been defined to be—"the language of the violent passions, expressed in measure, with strong accent and significant words." This in substance, though differently modified, is now, I believe, the most common definition. Without deciding upon either, for none of them are entirely satisfactory, it is presumed that something of what is more peculiarly appropriate to poetry, has now been incidentally pointed out. I shall not therefore attempt a definition of poetry; and to describe its sphere and settle its boundaries, would lead me into a region of speculation, too much disputed, too intricate, and too extensive for my purpose; which is to give a slight sketch of the history of ancient poetry.

ORIENTAL POETRY.

The existence of the art of poetry may, in some sense, be nearly coeval with man. It supposes no extraordinary advancement in learning and refinement; for it is the legitimate offspring of the imagination, whether she be brought into strict subjection to the understanding, or be altogether free and unrestrained. The earliest record however concerning any thing of a truly poetical cast, is in the book of Exodus. We there find that exquisite lyric strain uttered by Moses, and echoed by Miriam and her coadjutors, with accompanying instruments, commemorative of the goodness and the power of Jehovah, in conducting the people of Israel through the Red Sea, rescuing them from their enemies, and overwhelming their pursuers in those very waters which were miraculously divided for the passage of the Israelites. In one of the historical books of the Hebrew scriptures we meet with a very touching elegy of David, after the intelligence of the death of Saul and Jonathan. The Lamentations of Jeremiah afford many striking passages of the same elegiac tenderness; and after mourning over the miseries of Jerusalem, we are not a little excited by that transition to his own calamities, described with much feeling, and with unequivocal marks of grief and anguish. David excels all the

Hebrew poets extant, in the number, and variety, and devotional character of his poems. The Psalms are a collection of lyric pieces, which appear to be the offspring of genuine piety, and have all that diversity, which might be expected to result from different occasions and circumstances. But many of the titles afford us no light concerning those occasions and circumstances.

In some of the prophetic books, especially in Isaiah, there are the most wonderful specimens of sublimity, which language is capable of conveying to the imagination. Though the descriptions of Jehovah in his attributes and providence are accommodated to our conceptions, through the instrumentality of sensible objects and images, yet in general they are calculated to give us more lively and exalted impressions than we should derive from mere abstract notions of his infinite perfections.

The book of Job should not be passed over unmentioned. Whether the author preceded David, or was contemporaneous, or lived after him, are questions, upon which the critics on the Old Testament, in settling the chronological order of authors and events, are divided. But it is agreed, that the book under that name is of high antiquity. It affords a most interesting example of constancy under suffering, and a mind triumphing, by the aid of conscious virtue and vigorous faith, over a succession of adverse events, and the perplexing conduct of real or pretended friends. Considered as a poetical book, it is magnificent and diversified, much adorned, and deeply affecting. It has something too of dramatic effect. The colloquial parts sustained by the four persons brought on the stage, are animated and appropriate, and the characters are distinct and well defined.

In all these writings, as well as in those of the minor prophets, are interspersed many allusions to pastoral life, drawn from the personal occupations, and the relative connexions of the authors. David was called from feeding his father's flocks, to receive the royal unction from the hand of Samuel; and this ceremony performed, he again returned to his ordinary occupation. To understand and perceive the beauty of the pastoral scenery of these writings, one should have some knowledge of

the climate, and productions, and nature of the country, which furnish its favorite objects. But to pursue the subject in these particulars, and to give a selection of passages, as specimens of the poetical genius of the Hebrew writers, would require an essay by itself. If the point of discrimination be sought between the poetical and the other books or passages of the Hebrew scriptures, it will be ascertained partly by the diction, and partly by the structure of sentences or members of sentences. The parts that are properly called poetry, as those that have been already noticed, abound in lively comparisons, local allusions, and strong metaphors and allegories. They are also distinguished by a peculiar rhythm, and a sort of stanza, consisting generally of two, but sometimes of more principal divisions, or versicles of nearly equal length. These stanzas appear frequently in the form of a declaration and a response, or a sentiment uttered, and an amplification subjoined: and it is supposed that in the performance of the lyric parts by musical choirs, an alternation was observed: and when one band began, (for example) *The Lord reigneth, let the earth rejoice*, the chorus took up the corresponding line, *Let the multitudes of the isles be glad thereof.* Sometimes these stanzas consist of an affirmative member; and a negative member so constituted as to support the affirmative, and the reverse. In the following instance the affirmative precedes. *I have hated the congregation of the evil—I will* NOT *dwell with the wicked.* Again the negative takes the lead. *I have not hid thy righteousness within my heart—I have declared thy faithfulness and thy salvation.*

The attempt has often been made, and successfully made in the opinion of many critics, to reduce the poetry of the Hebrews to a regular measure, and to apply the rules of prosody to its construction. Some writers have, in consequence of their theory on this subject, proposed emendations and various readings, which have beside this no support, except in their own conjectures, and have thus allowed great latitude to the art of criticism, giving to its laws and canons a new direction, and applying them in conformity to a vague and doubtful theory; with a powerful auxiliary indeed in their own imaginations, and in their speculations concerning what is probable. Criti-

cism of this kind, in a language extremely limited in its vocabulary and forms of expression, must be very unsatisfactory.

The modern Hebrews have attempted poetry conforming to certain rules of versification, and in rhyme; but whatever of excellence is to be found in their writings, may be traced to their scriptures, and as for the rest it probably belongs to the great mass of Rabbinnical absurdities.

Asia seems always to have been a favorite region of poetry. The Arabs are such lovers of this art, and so persuaded of its enchanting power and efficacy, that they give it the name of *lawful magic*. They consider the fine sentiments expressed in prose, as pearls and precious stones strewed at hazard, and of little worth; but when they are connected together in verse, as ornaments fit for the diadem of kings. The same elegant allusion, observes Sir William Jones, is preserved by the Persians; and among them—*to thread the pearls* is a common expression for the composing of verses. This great oriental scholar, it is well known, has discovered many ancient writings in the classic language of this portion of Asia, which are monuments of poetic genius.

The fruitful imagination and fervid genius of the eastern poets is to be ascribed in part to the climate, and to the beauty and fertility of that section of the globe which they inhabit. Accordingly their compositions in poetry are full of comparisons drawn from the natural objects that they behold around them. As in the sacred books, the verdure of mount Carmel, the height of Lebanon, the vines of Engeddi, the dew of Hermon, the rose of Sharon, and many other objects, afford from their individuality comparisons of wonderful elegance and vivacity; so the spices and perfumes, the birds and flowers associated with, because they are peculiar to certain delightful spots, embellish the poems, and vary the images of the Arabian and Persian bards. It was observed by one of the Peripatetic school,* concerning the verses of Sappho, that they were indebted for their sweetness and delicacy to the choice of images which they exhibit, all taken from what is most lovely in nature. They are filled with descriptions of gardens, of fountains and

* Demetrius Phalerius.

meadows, of flowers and fruits, of turtle-doves and nightingales, to say nothing of banquets, and loves, and graces. The same remarks in substance are now embodied in every description of the art of poetry; and one of the first rules is, draw from nature, that your work may not be the mere likeness of a likeness.

Nothing is better confirmed than the favorable situation of those Asiatics, who dwell beyond the tropic of Cancer, and not extending to a high northern latitude, for observing nature under all the forms of beauty and sublimity. Such is the situation of Persia, of a large part of Arabia, and of Indostan. If we may trust Sir William Jones with the same confidence in regard to taste and judgment, as we can in respect to learning and entire freedom from the despicable impostures of an empirical *dilettante*, the oriental poets surpass in beauty of diction and force of images all the authors of Europe, except the lyric poets among the Greeks, Horace among the Latins, and Merino among the Italians. No one however is infallible in matters of taste; but this is an opinion which, from the source whence it comes, is entitled to no inconsiderable respect. Yet still, as the case must be determined by an acquaintance with the originals, in the several languages of the poems that come into comparison; few in the world have knowledge or opportunity sufficient to examine the correctness of Sir William's opinion. The same author remarks, that, as to images of terror, and every thing which produces the sublime, no instances more striking can be found, than in the poets that inhabit the deserts and mountains of Arabia: since they are surrounded with dark forests, horrible precipices, steep rocks, and frightful caverns.

Among the Arabians verse and even rhyme appear to be of high antiquity. But in their verses rhyme is not so great a restraint as in the modern European languages; the language of the Asiatics being very abundant in words of similar termination. It is as well to this great facility of versification, as to the early maturity to which the climate perhaps in some measure conduces, that Sir William Jones ascribes the wonderful attainments of many young poets in their favorite art; attainments unexampled in any other part of the world. This pre-

cocity it seems is cherished with great zeal and high expectations; and the least spark of genius that becomes visible is not suffered to expire.

After lavishing his praises upon the Asiatics, the learned Jones assures us, that he means to deduct nothing from the merits of the ancient classic poets; and is willing to consider the Greek poets as the standard by which the excellence of the Asiatic is to be determined; and that whatever is to be praised in the last, consists in a resemblance to the first. But, he subjoins, "it is natural to write with warmth and vivacity upon a branch of literature, in which we have had the first honor of making any considerable advances." Some deductions no doubt are to be made for the charms of novelty accompanying the works of imagination of a people, whose language, and customs, and modes of thinking distinguish them so entirely from a European, before initiated only into the common, though higher gradations of academical learning. There may be here and there one so proud of the literature and genius, the oratory or poetry of his own country, as to exclaim, *Cedite Græci et Romani;* but in general, what we have bestowed great pains to acquire, we are disposed, in a degree nearly corresponding to the cost, to value and to praise: and after being wearied with the recurrence of phraseology, and metaphors, and allusions, and personifications in English poetry, which have existed time out of mind, we can hardly trust our judgments, amidst the first transports of novelty felt on entering a new region of fancy and of fiction, with the decision on the comparative excellence of what has wearied us from dwelling upon it too long, and of that which may happen to please us from the mere suddenness of the transition.

GRECIAN POETRY.

In Greece are to be found models in almost every species of poetical composition. We might here speculate much upon the particular states of society which should generate works of excellence in the several departments of this art. But though circumstances of this kind have their influence, and give a tincture to productions that savor of the diversified conditions of

the social state, we can imagine no condition which excludes every species of poetic attainments. We shall find it most satisfactory on this subject of the origin of poetry among the ancients, to recur as far as possible to facts.

Some of the Grecian philosophers and critics elevated poetry far above human control. They made it the offspring of a certain divine *afflatus*, which it was presumptuous to attempt to direct by the rules of art. According to this supernatural origin, where the inspiration was once acknowledged, every poem ought to have been esteemed perfect in its kind, and the critic would have been foolishly employed in attempting to settle the comparative excellence of different productions, which should claim a common measure of praise and reverence. The term however was probably meant to be understood in a qualified sense, and conveyed perhaps no higher meaning than *inspiration*, as applied by the moderns to works of poetic genius.

Both in Greece and Rome there were those who contended for the antiquity of the Sibiline verses above that of all other poems; and from the supposed diversity of these, perhaps the notion of inspiration was transferred to the whole products of the art of poetry. Several writers have made mention of a Sibil who prophesied before the Trojan war; from whom Horace borrowed several lines, and particularly the prophecy that is again copied by Virgil, respecting the rise of a new and dominant power in the house of Eneas. Others have remarked a striking resemblance in *style* between the Sibiline verses and those of Homer. We have indeed now no data for forming an opinion on this subject; but in regard to the Sibiline verses, so called, that are now extant, it is justly remarked by the author of the life of Erasmus, they are just as like those of Horace, as the *Epistolæ obscurorum virorum*, so much ridiculed by Erasmus himself, are like Cicero's epistles to Atticus, which the writers affected to imitate.

Of the Sibiline verses of the ancients we know nothing, except from the reverence in which they were held; for it would be unjust to estimate them by the pretended but spurious books of the Sibils that are now extant, which furnish the most contemptible *olio* of truth and of fiction which was ever mixed together.

"They were composed," says Jortin, "first by pagans, and then perhaps by Jews, and certainly by Christians, and seem to have been all from first to last, and without any one exception, mere impostures. They abound," he adds, "with words, facts, and passages, taken from the Septuagint and New Testament, and are a remarkable specimen of astonishing impudence and miserable poetry." They have found a defender however in Isaac Vossius, a writer of wonderful intrepidity in the encountering of paradoxes, who hazards the singular opinion, that they were *forged* by *inspired* Jews, and are therefore to be received as creditable prophecies. But leaving the Sibiline verses to the same fate with that of the ancient oracles in general, which Cicero says in his time were miserably prosaic, we come now to a sketch of the history of poetry in Greece and Rome.

Greece, without recurring to her fabulous history, claims a high antiquity for her poets. Homer is generally allowed to be the most ancient profane writer that has come down to our times. By the lowest computation, he lived almost nine centuries before the Christian era. Hesiod is the only poet for whom a priority in respect to time has been strenuously maintained; and Quintillian has decided in his favor. But the more commonly received opinion is, that Hesiod, though contemporary with Homer, was as an author somewhat subsequent to him.

Panegyric so unqualified and universal has never been bestowed on any poet, as that which has been lavished upon Homer. By the greatest men of ancient times he was even deified, and in some instances actually worshipped. He has been the wonder of all ages, and the admiration of all who have read his poems in the original or in the translation; and it has ever been at the hazard of one's reputation for learning, judgment, and taste, to be any thing less than an enthusiastic admirer of the father of epic poetry. It is needless therefore to add our stone to the pile already so immense. The religion of Greece was indeed favorable to the grandeur aud sublimity of the *Epopee*. Having various deities, whose sexes as well as provinces, and characters, and dispositions were different, to which therefore they were not obliged at all times to ascribe a unity

of purpose, these personages could be introduced without the violation of probability, exercising powers far surpassing those of man, yet at the same time entering into the designs of contending parties; and could be so disposed, that the more powerful should support the main action, and bring it to the intended issue. In this way they acquired a machinery powerful in its operation and effects, of which they who have been taught the more sublime doctrine of the unity and unchangeableness of deity can have no adequate conception, and which they can make in no great degree subservient to similar purposes. Witches and ghosts, and perhaps we may add fairies, however strange it may seem, often become potent machines in modern heroics, and are by no means contemptible personages. But, as a substitute for the machinery of the ancients, we are for the most part reduced to the necessity of creating in imagination physical personages that represent the things of nature, and moral ones which are images of virtues and vices.

It would carry me much beyond my purpose to treat particularly of any species of poetry; of its peculiar properties and legitimate objects. I shall only therefore remark concerning Homer, that the Iliad and Odyssey are the only works that are confidently ascribed to him, and that each of these by itself bears the marks of one and the same hand, and does not exhibit that of a compiler.

The works of Hesiod appear from the allusions of the ancients to have been numerous: but the remains of them, that have been transmitted down to us, are comprised within a small compass, and some parts of these which are ascribed to him, are perhaps supposititious. They furnish us with specimens of the legendary tales, the ethical notions, and the rude arts of a remote age. His poem, entitled *works and days*, is the oldest georgic composition extant; and besides the instructions that are imparted to the cultivator of the field, it contains a variety of moral reflections worthy of a refined philosopher. The *Theogony* of Hesiod is an irregular poem, and destitute of art; but valuable for its account of the gods of antiquity, and particular mythology of the Greeks. It has been supposed by some that Homer and Hesiod invented the system of mythology that

constituted the complicated machinery and extravagant embellishment of the heathen poets; but it is much more natural to suppose, that they drew from vulgar notions and popular fables, what had been gradually accumulating, and had increased to this great assemblage of divinities, than that they departed from all the commonly received religious opinions of their times and adopted a system into which their contemporaries must have been indoctrinated by a course of laborious discipline, before they could have experienced any pleasure from the parts which these personages severally sustained. The shield of Hercules, which is another work ascribed to Hesiod, is but a fragment of a poem, in which it is said he gave an account of the most celebrated heroines among the ancients. From the small remains that are now to be found, he is classed among the minor poets; but it appears from one of the Grecian historians, that in his time this poet was held in high estimation, and that his verses were inscribed on tablets in the temple of the muses.

As well in Greece as in every other country, we may suppose lyric poetry to be coeval with the rudest condition of the social state. Its origin we may say with peculiar propriety is in the heart. Though probably it was first confined more especially to religious ceremonies, and had regard to the relation of man to Deity, as a suppliant for his favors, or as expressing gratitude for such as were received; yet in time its sphere became more extended, reaching to occasions of various descriptions; to the feast and the dance, to scenes of rural felicity, to the ardor of love, and to the horrors of war. The muses became the favorite objects of invocation, and the gods were supposed to be the complacent spectators, and beneficent patrons of the peculiar rites and pleasures which the ode was intended to celebrate, or of the prospective issue of whatever affair it embraced. The characteristics of the ancient ode are generally sudden transitions, bold digressions, and lofty flights. Aiming, as did the lyric poets of Greece, at a height worthy of the gods from whom they affected to receive their inspiration, they soared above all rules; and disdaining the restraints even of poetic laws, became involved in obscurity.

The origin of the Grecian ode, however remote in fact, is fabulous in the account derived from ancient story. The poems of Orpheus are the productions of some one who assumed that name, in which there is so much charm, and not of the very Orpheus who received his lyre from the hand of Apollo. The whole fable concerning this personage is in itself poetical in the extreme. *He* might well be esteemed the son of Apollo and of the muse of eloquence and poetry, at the power of whose song the torrent ceased to flow, the fierce animals of the forest were tamed, and the mountains moved to listen; at whose mournful strains, in the descriptions of the poets, even in the regions below, the wheel of Ixion rested, the stone of Sysiphus ceased to move, Tantalus forgot his perpetual thirst, the furies were assuaged, and Pluto and Proserpine relented.

The two most celebrated lyric poets of Greece are Anacreon and Pindar. The odes of the former are festive and amatory, distinguished for simplicity and sweetness of language; those of the latter are lofty and heroic, and written in a style suited to the subjects. Some of the most sublime hymns of Pindar, according to Grecian history, especially those addressed to the gods, are now lost. The odes that remain were composed on occasion of victories at the Olympic, Isthmian, Pythian and Nemean games. In union with the sublime conceptions and lofty manner of this prince of lyric poets, as he was called among the Greeks, that singular diversity and variety of measure is adopted, which relieve his odes from sameness and monotony, while still the harmony and music of his numbers are carefully preserved. Even in this diversity however there was something of system; and his manner is but ill represented in some of our English Pindarics, whose authors seem to think that the perfection of the ode consists in mere irregularity of versification, which in proportion to its extravagance attests their skill and ingenuity in this species of composition. It is unnecessary here to notice the hymns of Callimachus and others; for a complete enumeration is not intended.

It would be no less difficult to assign a time for the origin of pastoral poetry among the Greeks, or any other people, than for that of lyric. The earliest occupations of mankind being

such as presented before them continually scenes of rural simplicity; employed in tilling their soil and tending their flocks and herds; we may well suppose that in every species of poetry there would be interspersed frequent allusions to pastoral life, and abundant drawings of the beautiful scenery that all witnessed and enjoyed.

Deducing our rules from the ancient pastoral, they require, in this sort of poetry, simplicity, brevity, and delicacy. Something also of plot seems to be demanded for a basis. But the interlocutors should be few, not too talkative, not formal and dull, neither grovelling, nor very elevated in their diction and allusions. In the application of these rules a certain latitude in their interpretation must be allowed for the different customs and habits and general modes of thinking and speaking in different ages and countries. When shepherds were the founders of empires, and intermeddled in all the learning and science of their times, we need not be surprised at occasional indications of the knowledge they acquired. But, on the other hand, if Gesner or Fontenelle, or Florien should make the discourse of the peasantry of Germany or France savor of the knowledge of the statesman or the scholar, every rule of probability would be violated, and their eclogues would be exposed to extreme ridicule and contempt.

Theocritus, Bion, and Moschus are the principal Greek poets who excelled in pure pastoral composition. I have already anticipated in a degree the objections that have been raised against Theocritus, who is styled the father of pastoral poetry. He has been blamed for indelicate and obscene expressions, and for mingling in the discourse of his shepherds and peasants, who are supposed to be examples of the rusticity and ignorance of nature, sentiments of a lofty and refined description. For his indelicacies there is not, perhaps, a sufficient apology even in the customs and notions prevalent in his own time; but the incongruities that have been alleged against the discourse of the characters introduced, are such more in appearance than in reality, and may be accounted for from the circumstances already mentioned. The excellence of his Idyls is demonstrated by the servile imitations, not only of Virgil,

but also of modern poets, who have thus been betrayed into absurdities which are less easily forgiven, than the poverty of genius evidenced merely by what is humble or trite, and not by what is altogether incongruous and misapplied.

In merely descriptive and in didactic poetry, the Grecian writers do not abound; and satire never became among them a distinct species of writing; being confined chiefly to dramatic compositions. Hence it is that Quintillian claims satire for the exclusive property of the Latin poets.

Dramatic poetry did not, like the *Epopee*, attain to perfection from the first effort of genius; but on the other hand had an humble origin, and a variety of gradations in its advancement. The feasts of Bacchus, Susarion on his stage, and Thespis in his cart are the beginnings of dramatic shews.

Tragedy is supposed to have a date anterior to that of comedy; but so little is known of its earlier stages, that Æschylus is now called the father of Grecian tragedy. And when we join the names, Sophocles and Euripides to his, we have mentioned those writers of tragedy that belong to the Grecian classics.

An ingenious French critic has attempted to prove not only that the chorus, which forms so important a part of the ancient drama, was set to music; but also that the dialogue in general, which was carried on in recitative, was supported by instruments. The chorus is asserted by Hurd, in his dissertation on the province of the drama, to be the origin of the whole dramatic composition; but this is mere conjecture, and cannot be supported by direct historical proofs.

The Grecian tragedy is distinguished for the dignity of its personages and subjects, and for the unity of its action. Grecian comedy on the other hand was, in its earlier stages especially, remarkable for mean jests and low buffoonery. Critics upon the ancient drama have noticed three stages in the history of comedy among the Greeks. The earliest writers indulged in the licence not only of exhibiting actual and well known occurrences, but also of identifying them with living persons: and even the venerated name of Socrates was not secure against theatrical ridicule, when he himself was one of the audience.

After this practice was interdicted, and the players could no longer sport with real names, they contrived masks to resemble the *features* of those, whom they meant to attack. This is called the middle comedy. But the evil in this way was so little ameliorated, that what was thus introduced as a substitute for the first, was afterwards prohibited. Thus deprived of every thing that could give vent to personal hatred, or satisfy the malignity of mankind, it assumed another form from the hands of Menander, who confined it within the bounds of decency and morality, and received the appellation of Prince of the new comedy.

We can more easily form an estimate of the tragedy of the ancients, than of their comedy. The action of the former hinges for the most part on those passions which are common to our species: but comedy is more intimately concerned with the customs and manners of particular times and countries; and unfortunately so much has it been abused by writers of almost every period, that its tendency has seldom been to refine what is gross in manners, or to correct what is vicious in the moral sentiments and in the conduct of mankind.

I must here conclude this sketch of the history of poetry among the Greeks. A complete enumeration of writers in the different provinces of the poetic art has not been attempted. Much less could I comprise in so small a compass a critical account of their works. But enough has been done to remind us that there is much to be admired in various departments of poetry among the Greeks, and much to be learned from the study of authors, who inhabited a once highly favored region of the globe.

(To be continued.)

REMARKS ON DR. CAMPBELL'S DISSERTATION ON ἅδης et γεεννα.

DR. CAMPBELL, in one of his dissertations preliminary to his version of the gospels, proposes an argument, which seems to him powerful if not conclusive, in favor of an intermediate state of conscious existence between death and the resurrection. Whether there be such a state, it is not the object of this communication to inquire; since the result could be only speculation: and even if cer-

tainty could be obtained, the information would neither improve our faith nor animate our hope. But as the reasoning of Dr. Campbell claims to be philological, it may be worth while to inquire whether it is entitled to so much weight as its learned author attributes to it.

His argument seems to stand thus.—The Hebrew word שאול is used frequently in the Old Testament, and signifies *the state of the dead.* It is not synonymous with קבר, a *grave* or *sepulchre*, because these two words are never confounded with each other in the version of the LXX, and because the expressions of great depth, which are frequently applied to it, are inapplicable to a mere sepulchre or grave. This word שאול is almost invariably rendered by the LXX ἀδης. Now the idea which the Jews annexed to this term was that of a receptacle for departed spirits. This word ἀδης is used eleven times by the writers of the New Testament, and we must suppose that they used the word in its ordinary acceptation. Besides, that the same idea ought to be affixed to it as to the corresponding term in the Old Testament, is plain from Psalms xvi. 10. "Because thou wilt not leave my soul in hell, (εις ἀδης) neither wilt thou suffer thine Holy One to see corruption." To this passage, quoted in the very words of the LXX, St. Paul adds, Acts ii. 31. "his soul* was not left in hell, neither did his flesh see corruption." Here, from the antithesis of the two clauses of this sentence, it is plain, that ἀδης was as truly the soul's destiny after death, as corruption was the body's. We learn too in the Apocalypse, that "death and hell (ἀδης) shall be cast into the lake of fire." i. e. The death which consists in the separation of the soul from the body, and the state of souls intervening between death and the resurrection, shall be no more. The word ἀδης, then, though rendered by our translators *hell* in every instance except one, in which it is rendered *grave;* should never be translated either, *hell* or *the grave*, but *Hades:* that is, the place of departed spirits between death and judgment.

As the principal object of Dr. Campbell in this dissertation is not to prove an intermediate state, it is perhaps difficult to separate his reasoning upon this subject from the main design of his disquisition: but this, it is apprehended, is a correct outline of his argument, which he has filled up with much ingenuity and delightful allusion.

To begin with the word שאול, which is the corner stone of his hypothesis. It is so far from being credible that the Jews annexed

* Griesbach does not admit the words "η ψυχη αυτου" into his text.

to this word the idea of a receptacle where the soul remained after death; that they appear to have had no distinct notion attached to it. It is a term, which seems to express vaguely and indeterminately *the state of the dead.* The word ἀδης, by which the LXX render it, is also used in rendering the expressions צל מות, *the shadow of death;* אבני בור, *the stones of the pit*, and דומה, *silence.* This various use of the word ἀδης offers a strong presumption against its conveying so definite an idea as the hypothesis supposes. שאול is translated by ἀδης in the version of the LXX sixty times in the canonical books of the Old Testament; and the indistinctness of its meaning appears from the following circumstances: 1. Not only the soul of man is said to descend into it, but those luxuries and sensual gratifications, in which it delighted. "Thy pomp is brought down to the grave," (εις ἀδȣ) says Isaiah, "and the noise of thy viols: the worm is spread under thee, and the worms cover thee." 2. It is the word ἀδης, which is rendered by our English translators "hell," in Jonah ii. 2. "Out of the belly of hell cried I." 3. We have a third example in Isaiah lvii. 9. "And thou wentest to the king with ointment, and didst increase thy perfumes, and didst send thy messengers far off, and didst debase thyself *even unto hell.*" 4. The sorrows of hell are spoken of, (ωδινες ἀδȣ) and applied to worldly affliction. Psalms xviii. 5. 5. In Psalms ix. 17. we read: "*the wicked* shall be turned into hell, (εις τον ἀδην) and all the nations that forget God." ἀδης here appears to mean only destruction. These examples are sufficient to show how little precision and uniformity there is in the signification of these words. Many critics have contended that שאול is synonymous with קבר, *a sepulchre.* This opinion appears to be successfully combatted by Dr. Campbell, in the two arguments which have already been stated: 1. that these words are never confounded with each other in the version of the LXX; and 2. because we cannot suppose the expressions of great depth, which are applied to שאול, to be applicable to a grave. Thus in Deut. xxxii. 22. God is represented as saying: "a fire shall be kindled in mine anger, that shall burn *to the lowest hell.*" (εως ἀδȣ κατω.) "It is high as heaven, what canst thou do? *deeper than hell*, (βαθυτερα δε των εν ἀδȣ) what canst thou know?" Job xi. 8. But this reasoning, though conclusive that שאול and קבר are not synonymous; by no means proves that שאול may not be rendered with propriety "*the grave.*" Indeed there appears to be no word in our language, which expresses the mean-

ing of the Hebrew word with so much accuracy. The word *grave* conveys very different ideas, according as we annex to it the definite or indefinite article. *A* grave can indeed mean nothing more than a place for depositing dead bodies; but our expression *the grave* has acquired a different import: it does not mean, unless applied to some particular grave, a receptacle for dead bodies; but it is an obscure and vague expression synonymous with *death*, or *the state of the dead*, or, as Archbishop Newcome paraphrases, *the future invisible world.* We frequently speak of *the secrets of the grave.* No one imagines for a moment that we are speaking of the secrets of a hole in the ground: we are instantly apprehended to allude to the state of the departed spirit, and to the secrets of the invisible world. "It is higher than heaven, what canst thou do? *deeper than the grave*, what canst thou know?" is really not a harsh construction; and it is trifling with us to tell us of the absurdity of saying: "it is higher than heaven, it is deeper than *six feet.*" Our word *grave* has been shown to have acquired a transitive meaning; and the whole sentence is couched under a plain and familiar metaphor. The expression "deeper than the grave" is equivalent to saying, "more unfathomable than the secrets of the dead." Thus it appears, that "the grave" and שאול are as nearly of the same import as in languages so different and remote from each other, could be expected; and that there is as much reason for supposing them synonymous as שאול and ἀδης. This would appear more closely by collating the passages, in which שאול is rendered ἀδης by the LXX.

Dr. Campbell produces two detached passages to support his favorite notion of Hades. The first is: "thou wilt not leave my soul in hell, neither wilt thou suffer thine Holy One to see corruption:" the second is from the Revelation: "death and hell shall be cast into the lake of fire." With regard to the latter of these, it is only necessary to observe, that it is but an ingenious adaptation of the text to an hypothesis already assumed. As to the former, without giving up the opinion of some eminent critics, that this is an instance of repetition or parallelism, so common among the Hebrew writers; it will only be inquired what the legitimate conclusion of Dr. Campbell's whole argument would be, if all his premises were allowed. It could be nothing more than this: that ἀδης means the intermediate state of the soul between death and judgment. This is a conclusion hardly worth the preparation of so much

critical apparatus. Unless judgment immediately follows death, it is plain that the soul must be in an intermediate state; else we are not raised, but re-created. The only question is, whether this state be a state of consciousness. Now it is evident, that the idea which was affixed to שאול not only did not imply consciousness, but absolutely excluded it. This will appear by examining the following passages, in which שאול is rendered invariably by ἀιδης. Isaiah xxxviii. 18. "For the grave cannot praise thee, death cannot celebrate thee, they that go down to the pit cannot hope for thy truth." Psalms vi. 5. "For in death there is no remembrance of thee; in the grave, who shall give thee thanks?" Isaiah lxxxviii. 11, 12. "Shall thy loving kindness be declared in the grave; or thy faithfulness in destruction? Shall thy wonders be known in the dark; or thy righteousness in the land of forgetfulness?" Ecclesiastes ix. 10. "Whatsoever thy hand findeth to do, do it with thy might; for there is no work, nor device, nor knowledge, nor wisdom, in the grave, whither thou goest." From these considerations it is believed, that it is better to translate ἀιδης in the New Testament universally "*the grave*," (for Dr. Campbell has clearly proved, that it should never be rendered "hell") than to mar the simplicity of our sacred writings by the introduction of a term borrowed from Paganism or Judaism; and whose signification is not more definite than that of the English word, for which it would be substituted.

POETRY.

The following poem was pronounced before the Φ. B. K. *Society at their last anniversary.*

GENIUS.

Unused her efforts by her powers to bound,
Grasping the skies, but destined to the ground;
No cowering flight the aspiring Muse assays,
Nor gives to lowly themes her lowly lays:
The eagle's path, without his strength explores,
And eyes unblenched the sun beam as she soars.
Thou wondrous charm, whose potent spell can bind
The restless vigor of the immortal mind!
Sun of that region—where all bards belong—
The "limbo paradise" of Milton's song!
Felt even by apathy, revered by pride,

Whose rays may dazzle, but not cheer, or guide;
Genius! may lips untouched by thee proclaim
Thy magic power—and thy more magic name?
Yet do not wrong the bard, nor rashly deem
His loftiest hopes are lofty as his theme.
Genius may show, obedient to his call,
Her upward flight, although no mantle fall;
Reveal her form, though not bestow her fire,
And prompt the lay she will not deign to inspire.
The limner's hand great NEWTON's form that drew,
Could paint the eye that looked creation through;
The wreaths by grandeur worn, mean hands have twined;
Even Bisset analyzed what BURKE combined;
Followed with wondering gaze his giant tread,
And sketched the seraph beaming o'er his head.
To deck with flowers this empress of the mind,
To sound her charms and splendor, be resigned
To bolder hands and worthier lyres; these lays
Add not one note to swell the peal of praise.
We hear no Syren, though of angel mould;
And crown no idol, though it frown in gold.
O glorious days, when worth was worthy deemed,
And when mankind all were the things they seemed!
When delving dulness, bending o'er his task,
Confessed his impotence, nor knew to mask;
When well-earned praise by toil and labor came,
And long and rugged was the path to fame:
They've passed; but left their legends to declare
That in our fathers' days such wonders were!
In gardens, courts, praise now is seen to dwell,
Not in the shady grove or silent cell;
Nor need the student "quit his ease" to gain
The fruits of labor and the prize of pain.
Let mad excess quench virtue's slumbering fire;
Bœotian poppies lull each high desire;
Enough, if Genius rear her crest sublime,
Atone for indolence and plead for crime.
Is this the fame whose height allures the eye,
Laborious merit passed derided by?
O precious counterfeit! degrading rise!

How poor in value, yet how rich in price!
Praise which eccentric dulness may attain,
And art and impudence conspire to gain.
Lo, yonder train! composed of show and pride;
Giants in trifles, dwarfs in all beside;
Whose tinsel splendors on the surface glow:—
Are they not jewels, since they sparkle so?
And all that tasteless, rustic, rusty rout,
Are surely diamonds—they're so rude without!
Whence is this canker of our fairest bays?
Whence springs this eager thirst for worthless praise?
From false opinions, urged with senseless rage:
That make a monarch what was meant a page;
Divorce applause from worth, and worth pervert,
And weave their crowns for fortune, not desert.
Who turns from Etna to the solar beam?
From foaming torrents to the healthful stream?
Thus grandeur, though in terrors, we admire;
And spurn the honors we may all acquire.
Such, genius, is thy praise; thus proud thy claim;
O weak foundation of a spurious fame!
What strange then, if we grasp what's easiest won?
Nor buy with labor what we win with none?
Yet speak, ye votaries of this wizard power:
Define the fearful phantom you adore!
That all within, without, around, invades;
That haunts our closets, penetrates our shades,
Gives the base splendor, and the worthless price,
Ennobles folly, canonizes vice:
That still as power permits, or fortune crowns,
Is bright in smiles, or terrible in frowns;
Now, bathed in hues of heaven, a seraph glows,
And power, and fame, and wealth, and worth bestows;
Now shrouds in gloom its dimly-imaged form,
Glares through the clouds, and wails amid the storm.
Say;—can it lull their throbs of wounded pride,
Who at its bidding toiled—and toiling died?
Can it to life, and joy, and hope restore
The breast it bid enjoy and hope no more?
Efface the furrows ploughed on virtue's cheek,

And heal the heart itself has forced to break?
Soothe the sick pang, repress the extorted groan
When wildered reason totters on her throne?
Can it recall the fire of fancy fled?
Preserve the living or awake the dead?
If so—then bid its boasted beams illume
Poor COLLINS' madhouse or sweet TASSO's tomb!
Where LOGAN lingered, Mc DIARMID pined,
And their last labors with their life resigned;
Where keen regret and disappointment sleep;
Where wounded feeling has retired to weep;
There bid it shine—display its mockery there—
The haunts of genius, famine, and despair!
It cannot now restore the forfeit paid;
Nor build the ruins that its madness made.
How dark, yet dear, the page to memory's eye;
Where genius drooped, or triumphed but to die!
How sad the task, to trace the heirs of fame
Through toil and want, through anguish and through shame
And view those victim-conquerors of fate,
Lovely in suffering and in ruins great!
Pause we to gaze upon these spirits high,
Admire their worth, and mourn their destiny.
Lo, at imaginations bold command,
Three mournful forms in shadowy order stand!
The eye, where feeling's purest beam was given,
Is fixed on earth, or tearful raised to heaven;
The cheek, once flushed with hope, is marble now;
And the sad cypress droops around their brow.
What untold cause thus bows these forms sublime,
Their splendor dims, and does the work of time?
Why that alternate glance of gloom and care,
That vice and wretchedness alone should wear?
Alas! with aching heart shall memory tell,
They loved what virtue loved—and loved too well!
Not theirs the rugged firmness, that reviles
In turn for scorn; that suffers and that smiles;
Their gentler spirit and their finer form
Shrunk from the blast and broke beneath the storm.
Who first appears? the wandering eye betrays

The maniac bard of England's happiest days;
Who each extreme of bliss and anguish knew,
The child of fancy—and its victim too.
With cruel fondness, at his natal hour,
Genius infused her fervor and her power;
But gave no guide to counsel or restrain;
His fervor rashness, and his powers his bane!
* O fate, to Homer's sightless bard's allied!
She gave the light of song, and quenched all light beside.
He toiled, endured, and hoped, till hope was dead,
Till thought was agony, till reason fled.
Remembrance oft shall haunt with awe the spot,
Where frantic COLLINS raved—and was forgot;
Where his wild shriek, or sullen, phrenzied moan,
Mixed with the pealing organ's vesper tone:
The wreck of feeling still would linger near,
To catch the sounds its childhood loved to hear.
Sweet bird of Albion! thy too fragile wing
Was formed for gentler skies, for ceaseless spring;
Yet was thine ardent weakness doomed to fly
Through wintry winds, and brave a stormy sky;
Till to the ground thy faded form was born,
Thy bold notes silenced, and thy plumage torn!
Known by his modest yet majestic mien,
Next nature's simple moralist is seen.
The Christian's meekness and the poet's fire,
With blended charms his every look inspire.
Poet of OLNEY! thine was not the fate
To cringe to greatness, or to court the great;
To feel by want thy soul's warm current checked,
Or brave the colder winter of neglect;
But pure and ardent as thy deathless page,
Thy virtues cheered thy peaceful hermitage.
Yet there were hours to wring thy maddening brow,
When vice and penury would not be as thou!
When fancy's cruel light could only show
Terror's dark frown, the haggard form of woe.
The tenderest flowers yield soonest to the stroke;

* "Τον περι Μϐσ' εφιλησε, διδϒ αγαθον τε κακον τε,
Οφθαλμων μεν αμερσε, διδϒ δ' ηδειαν αοιδην." Od. Θ. 63—4.

The finest texture is the easiest broke.
The cataract roaring from some rock's rude height,
Displays the rainbow ere it rush from sight;
So o'er the tide that bore thee to thy doom,
Thy virtues beamed, and triumphed o'er thy tomb.
O need I now that pensive youth to name,
Whom toil and sorrow gave a mournful fame?
Like the dim form by Virgil's hero seen,
Mark what he is—and what he would have been.
Not in the grave, thou noble, gentle shade!
While virtue lives, thy memory shall be laid.
Congenial souls shall to thy tomb repair,
And kindred Genius chant thy requiem there.
A fatal glory, WHITE, was thine to attain;
To cherish vain desires—and find them vain;
To bend beneath the weight that few could bear,
And taste the raptures fewer still could share.
Short was thy path and rugged—to our eyes;
But faith beholds it brightening in the skies.
And must it still be so? must Genius still
Be doomed to bear so large a load of ill?
Still feel its rays oppressed by ten-fold gloom,
And bring its jewels but to build its tomb?
Ask if the wave must ebb, the space it flows;
Ask if the thorn must still attend the rose!
In tropic climes, the unfrequent zephyr roves
On wings of incense through the spicy groves;
But the same power that crowns the teeming earth,
Creates its scourge, and gives its monsters birth:
The earthquake roars, the simoom fires the air,
There coils the snake—and springs the tiger there.
Why look to days long vanished? why reveal
What murdered Cowley, and what ruined Steele?
Their genius, destined to aspire in vain,
Bestowed its transports—nor withheld its pain:
It gave the floweret—but it broke the stem:
It smiled on others—but it frowned on them!
But turn we now from genius' hapless fate,
To trace its errors, and its crimes relate;
Still the same cause its double front will show,

And lead to folly as it led to woe:
The same mad influence banished Burns's rest,
That bound the penance-belt on Pascal's breast.
In luckless hour, bard of the minstrel's land!
Was left the rustic's for the poet's band.
Better to hide thy beams in night and gloom,
Than light the flames that blind thee, and consume:
More calm had been the life, more pure the breast,
Of Burns unhonored than of Burns caressed.
Behold him now—his lofty spirit bowed
To the gross joys that catch the vulgar crowd!
His fervor led him passion's wildering way,
And flashed its lightnings o'er his stormy day;
Yet if we trust himself, through frenzy-driven,
The light that led astray was light from heaven.*
Needs not the muse with cautious steps to tread,
And press no soil but where repose the dead;
Where'er we turn, the same effect we find;
Still the volcano leaves its track behind.
Who can unmoved that titled poet view,
Whose glowing pencil traced himself so true?
The same wild feelings with each theme combine,
And his own Harold breathes in every line.
Who but must grieve, while virtue must condemn?
So bright a lustre—yet so false a gem!
Byron! what strange extremes in thee allied,
Lend to thy name their censure and their pride!
Fertile of projects—yet without a plan;
A moody writer—but an ardent man;
A tender bard—with worse than skeptics gloom;
A fop in Paris—and a sage at Rome!
Next view the minstrel Greece had loved to claim;
The more than rival of Anacreon's fame.
O shame! that taste refined, that fancy warm,
Which might have charmed, while nature knew to charm;
Should yield their powers to pleasure's lawless sway,
Their efforts prostitute, their trust betray,
With orgies base a ribald song inspire,

* "But yet the light that led astray
Was light from heaven." *The Vision.*

And mix pollution with the vestal's fire.
There joined with Moore, to warm this languid age,
Athenian Ida opes her spotless page:
Page, on which Fielding—modest wight! might frown;
Which seven-tomed Richardson had blushed to own.
Yet what eccentric course, what feverish dream,
Can to this age of wonders wondrous seem;
When epic rules from epic Southey shrunk,
And spectre Murphy vanquished spectre Monk?
O that we here might pause! content, at best
To tilt with lance of straw at folly's crest.
No; still where genius leads, the muse must climb;
Must grieve at madness, must recoil at crime;
Crime, that might well a sterner frown require,
And wake to thunder the indignant lyre.
Can pride of power no *human* object find
To exert its ruffian energy of mind?
Will it no laws obey, no limits own?
Assail the skies, and threat the Eternal's throne?
Yes; such there are, by impious boldness driven,
Who give to Baal what they gained from heaven;
Whose infant souls, unheeding of the rod,
Peep from their cradles, and defy their God.
O for the pen, the royal fiend that drew,
To Ferney's *sage* to give the *honors* due!
Nought can be urged to palliate or atone;
Not the poor plea of passion:—he had none.
No nerve of feeling through his system ran;
Malice and intellect composed the man.
Yet from this cold black mass the tempest roars,
That heaves the ocean, and that rends her shores;
So Hecla blazes 'midst a waste of snow,
When all is icy, dark, and horrible below.
Thee, too, the enthusiast! virtue's frown severe
Meets thee:—but pity melts it to a tear;
Doomed for thine own another's guilt to share,
Classed with that monstrous compound, named Voltaire.
How falsely classed! what various bounds divide
Geneva's exile from the Frenchman's pride!
This stole to crime with all the assassin's will;

That, frantic, rushed alike to good or ill;
This trained in knavery's, that in passion's school;
This played the demon, and that played the fool.
Where, genius, now thy talisman of fame;
Thine eye of rapture, and thy heart of flame?
Thy trophies where? thy bannered pride unfurled,
That flamed from far and lightened through the world?
Where now the beams that charm, that guide, that save?
They warm an adder—and they gild a grave!
Yet there are powers to nobler heights that rise,
And shed on earth the influence of the skies.
Not in their blazing path eccentric hurled,
The wonder, gaze, and riddle of the world;
With even speed they urge their useful way,
While glowing nature triumphs in their ray.
Yes, there *have been;* O, why should memory tell
The unearthly force of the now broken spell?
Brother!* to thee was not the doom assigned,
To charm, and parting leave no trace behind;
Still live the virtues by thy precepts given;
The thoughts, first taught by thee to rest in heaven!
While worth and genius love and reverence claim,
Deep in our hearts we'll shrine thy sainted name;
And mourn with vain regret, till sense be dead,
The hope that's vanished and the dream that's fled.

Some facts respecting a note to the Eclectic Review of the Improved Version of the New Testament.

In La Trobe's translation of Crantz's History of the Moravian Brethren, there is a note by the translator, which is copied as a note to the Eclectic Review of the Improved Version of the New Testament. It is as follows—

"Samuel Crellius was a Socinian and a leader of that party. He is still quoted as one of their strongest advocates; but the endless mercy of our Lord was also manifest in him. He not only rejoiced to see his daughters bow their knees to the Crucified; but he himself turning to that Lord, called upon Him as his Lord and his God,

* Rev. J. S. Buckminster.

and found, at the latter end of his life, no consolation but in the atonement by the blood of Jesus, and wished that all his books could die with him. This has been testified, not only by his daughters, but by all who were with him before his end." *Note by the late Rev. B. La Trobe in Crantz's Hist. of the Moravian Brethren;* p. 201.

In consequence of meeting with this statement, the writer of the present article was induced to make some inquiries respecting its truth or falsehood, of Fr. Adr. van der Kemp, Esq. a gentleman every way qualified to give correct information on the subject. The following is an extract of a letter from him.

"I do not hesitate in the least, to declare that note in the Eclectic Review without any truth. I am persuaded I must have heard of the fact if it were as is asserted. Venema, who wrote against Crellius, and respected him—La Croze, who loved him, and was his constant correspondent, and bewailed his errors—as is evident from their correspondence—never suspected it. Till his death, Crellius was a member and the patron of the congregation of the Collegiants at Amsterdam, who were generally unitarians. He went to their place of meeting, with his sister, every sabbath day, when they were the only remaining members—and she proposed to serve their God at home; which he declined, full in hope of a revival—and he lived till he did see the congregation increased again to seventy. This I have been often told by respectable members of that congregation, who at that time could not suspect that Crellius' religious opinions would stand in need of their evidence. I know all this is negative proof. I shall therefore copy you the opinion of Bockius, whose orthodoxy as a trinitarian was, as far as I know, never doubted. He says—"In the *Nova Litteraria*, Hamburg, 1747, p. 703, there is a story that Crellius repented of his errors toward the close of his life, and gave clear proofs of unfeigned penitence. This, Paul Berger, archdeacon of Hermspruck, thinks not improbable, (see the same work for 1748, p. 345.) because, while he was residing at Amsterdam, Crellius, in the year 1731, informed him, that in consequence of conferences with the celebrated Schaaft, his belief of some opinions had been shaken, so that he was in doubt concerning

them. But in the same work for 1749,* pp. 92 and 480, we are assured that Crellius, to the last moment of his life, remained a unitarian. This, also, his brother Paul has repeatedly declared to me. Stosch in his history of the eighteenth century, which Jablonski has made the third volume of his ecclesiastical history, p. 424, says—'I remember that Crellius, when I visited him at Amsterdam in 1742, and we conversed much on various doctrines of Christianity, declared to me with some warmth, that he did not adopt the system of Socinus, but rather with his whole heart believed the doctrine of the satisfaction of Jesus Christ, in the sense in which it is taught by the Remonstrants, and that he was persuaded that through Jesus Christ all men would at some time be saved and delivered from the pains of hell. He added that he was certain that there were now to be found few or no Socinians, properly so called.' In Strodman's *Europ. Litter. Nova* Tom. I. p. 283, Crellius himself thus writes—'I have at all times, as well among the unitarians as the remonstrants, taught the expiatory sacrifice of Christ, and my instructions have not been contradicted.'" [Fred. Sam. Bock. Hist. Antitrin. Lips. 1774. Tom. I. Part I. pp. 167, 168.]

"Stosch, mentioned above by Bock, likewise says—'It seems to me to be asserted without good reason, that Crellius renounced his errors before his death.' Stosch was a trinitarian as well as Bock. His book is a college book, used in the Dutch academies as a text book in ecclesiastical history."

I ought perhaps to notice that Samuel Crellius, referred to in what precedes, is not to be confounded with his great uncle, the famous John Crellius, who was one of the Fratres Poloni.

* Crellius died at Amsterdam May 12th, 1747.

[We insert the following at the request of a very respectable correspondent, who says—"If this sketch deserve your approbation, I shall be gratified if you procure it a place, under the article of Intelligence, in the next number of the Repository. I am tired of copying it, and in my opinion it would be a valuable work if well executed."]

For the Repository.

SKETCH OF A DESIRED WORK.

Moral and physical causes of the revolutionary spirit in the latter part of the eighteenth century, with their probable issue on both continents.

"Ardua quæ pulcra."

GENERAL *observations.* (Preliminary.)

Previous situation of Europe and America, 1750.

General sketch of Europe since its invasion by the northern nations.

Value and necessity of studying the annals, records, ballads, romanzas, and other writings of the middle age.

Establishment of the Feudal system.

Its origin, extent, and ramifications, even through the church establishments. Its nature, strength, means, advantages, abuses, consequences. Its partial overthrow: Means; communes, gilden corporations. Its consequences in various parts of Europe: mediate, immediate; in England, on the continent.

Henry VII. Ferdinand and Isabella, Louis XI. Henry IV. Sully, Richelieu, Mazarin.

Parliaments, national assemblies, Cortes; Eng. France, Spain. Origin, design, power, existence, fate.

Corollary.

Humbling of the vassals; increase of power of the people; in the cities, country.

Resurrection of letters. Birth of the spirit of inquiry.

Its causes; Monasteries, learned Greeks in Italy: Lorenzo de Medicis: discovery of the Pandects. Effects; mediate, immediate.

Consequences; Italy, Germany, France, England. Lord Bacon, Newton, Leibnitz, Wolf.

Reformation.

Occasion, means, success. Its consequences; Italy, Germany, France, England.

Discovery of America. Doubling of the Cape of Good Hope: Circumnavigation of the globe.

Colonisation. Its nature. In what different from the ancients. Manner, views, consequences.

Commerce. Gold, silver; banks; public credit; bills of exchange.

View of Europe under Louis XIV. XV. Cromwell, William III. Anne, Louvois, Colbert, Walpole, Alberoni.

State of religion, morals, sciences.

Continent; papal power since the reformation till the annihilation of the Jesuits.

Pope, clergy, mendicants, Jesuits, Benedict XIV. Clement XIV. Bourbon, Austria, Bavaria.

Protestants, hierarchy.

Calvinists; Bern, Geneva, Holland. Calvin, Synod of Dort.

Lutherans; Denmark, Saxony, Brandenburg.

England; Episcopacy, Puritans, Dissenters; prognostic.

Tolerance. Advocates, principles; continent; England; Locke, Noodt, Bayle, Barbeyrac, Goodricke.

Moral Sciences. Men of letters; views, efforts, success.

General observations; with regard to religion, commerce, learning, politics.

Civilians (Publicists.)

Grotius, Puffendorf, Burlamaqui, Du Vattel, Bynskershoek, Conring, Heineccius.

Ecclesiastic law; Erastus, Hobles, Thomasius, Boehmer, Vander Marck.

Diplomatic history.

Treaties of Munster, Nymeguen, Ryswick, Utrecht, that of the Pyrenees, Tilsit. Prospect of a general solid treaty; its basis.

Mabillon, Montfaucon, Muratin, Leibnitz, Datt, Vertot, Dumont.

General bent on the continent of Europe, to imitate French manners, fashions, language; admire their literature, and adopt their principles.

Spirit of philosophising and levelling in Europe. Its spread; its disguises; France, Germany, England.

Liberty of the press. Advocates, principles, abuses, means.

Particular observations. Typography, &c.

Modern philosophy.

Oeronamists, principles, views, methodical plans, means, success. La Rivere, Mirabeau, Vauban, St. Pierre; Ephemerides;

Cadastre; Victor Amadeus, 1732. Doom's day book.

Encyclopedists. D'Alembert, Diderot, Helvetius, &c.

Views, means, open, clandestine; zeal, intrigues, intolerance.

Protectors; Frederic II. Catharine II. Leopold, &c.

British share in the general corruption; Bolingbroke, Hume, &c.

Generality of the revolutionary seeds in both continents; proofs.

Stupendous effects above human conception; proofs.

Particular consideration of the principal hotbeds; America, France; their peculiar influence.

Corollary. Proofs of an overruling Providence.

Diffusion of incorrect information among the lower classes in the cities, without an adequate counterpoise of an improvement in morals.

Prevalence of political disquisitions and discussions. Study of antiquities; first national, then ecclesiastical, civil, in every country; followed by that of natural history, natural rights of men, origin of society, government, &c.

Montesquieu, Rousseau, Turgot, Mably, Condorcet, Adams.

Knowledge of the British constitution on the continent; Locke, de Lolme, Sidney, Burgh, Price.

Commerce; England, Holland, France, North of Europe.

Consequences.

Abuse of power; exertions to extend it; Continent, England.

Loose principles in religion and morals.

Sapping of the throne and church; confounding ranks, ridiculing orders. Proofs; England, Continent.

Clubs (political) of the middle and lower classes; mercenary writers; anonymous pamphleteers.

Diminution of the pomp and splendour of royalty, replaced by a confidence in a numerous army.

Standing armies.

Origin, means, final tendency, without, within. Consequences on the mass of the nation.

Liberty, population, commerce, agriculture, finances.

Diminished influence of the clergy. Its causes, consequences.

——— ——— nobility. ———

Corollary; dependence of both on court favor, through which even the shadow of an intermediate power between the king and his subjects was removed.

Increased luxury and corruption of morals; proofs.

Insolence of the eommon people.

General view of Europe in 1763. England, France, Prussia, Russia, &c.

Peace between the powers engaged in the seven years war.

Revolutionary spirit; its developements.

Man—a rational, social, moral being.

Scholium.

Corollary. Progress of the human mind.

Social compact; its basis, requisites, boundaries; unalienable rights—safety of life, security of property, civil and religious liberty.

Theories to obtain and secure these possessions in the highest degree of perfection to all the associated. Means, obstacles.

Contour of the *Tableau.* Its parts; executive, legislative, judicial; tribunal of correction. Their cement, ornaments, means of preservation; symptoms of disease, danger, remedies, crisis, encouragement, prospect.

Revolutions.

Geneva; preliminaries.

Situation from the middle of the eighteenth century. The intentions yet good, the morals visibly declining. Its causes, means. Factions; Aristocratic France, Swiss Cantons; mediation.

Venice; Long since in a state approaching dissolution; causes, means; annihilated without resistance.

Genoa, Tuscany—Leopold, Lucca, Sardinia, Lombardy, Sicily, St. Marino.

Switzerland; dissensions; civil, religious. Depopulation; causes, consequences. French influence; dismemberment; mediatorship.

Denmark; revolution in 1660, Acta Regia, present situation.

Sweden; dissentions, origin, Vergennes; revolutions, Sudermanland, expulsion of Gustavus, Bernadotte. Peace with England. Acknowledgment of Ferdinand VII. of Spain.

Corsica; struggle, conquest; Paoli, Marboeuf.

Poland; dissidents; confederates, views; mediating powers; partition 1792.

Catharine II. Frederic II. Maria Theresa.

Revolutionary trial, Kosciousco, issue, 1793.

Progress of the revolutionary spirit among crowned heads.

Pretext of resuscitating the republics of Greece. Catharine II. Joseph II. Russia, Tartars.

Prognostic. Project of an armed neutrality; its conception, birth, and death.

Revolutionary spirit in America.

First congress in Albany, 1754. A federal representative government in embryo. Causes, pretended, remote, occasional, efficient. Origin, progress, views of both parties. Great Britain, North America.

France, Holland.

Situation of France.

Louis XV. power of the crown, parliaments, opposition, causes, lawyers, (gens de robe,) lettres de cachet. Vergennes.

Finances. Henry IV. Louis XIV, XVI. Sully, Colbert, Neckar. Causes of their derangement, means of redress, issue.

Clergy; situation, archbishop of Aix; Autun, Toulouse; toleration edict of 1786.

Nobility, numerous; Duc's D'Epernon, Sully, Henry IV. Pedigrees in the royal library 1785; La Maison du Roy; battles of Lawfelt, Raucoux.

Luxurious indolence.

Enormous civil list, golden book, prodigality of the court, princes, ministers, cupidity of the courtiers, influence of women; pusillanimity of the best of the commonalty in the beginning of the contest.

Profligacy of morals, in the capital; populace; state of the police. Remedies, means, inefficacy from their want in energy, propriety, adequacy.

Views of the court and nation at the beginning of the American revolution.

Revolution in Holland. Preliminary observations.

Situation in 1700, 1748; Stadhouderat, William IV. V. Louis of Brunswick; views.

Army; West India regiments; commerce, navy, Amsterdam, Van Berckel 1766—1775; military jurisdiction, history, extent, abolishment; Vander Capellen; Scotch brigade; Corvées, abolishment. Opposition, views, armed volunteers, organization of clubs. Illimited convoys, naval stores. French influence and intrigues, La Vanguion, Berenger; British, Sir Joseph Yorke.

Provisional treaty with North America.

The Scheldt; peace bought by money, advised, shared by France.

Factions, animosity, dreams as if France and Great Britain courted, disputed her alliance, while the only question was, who should become their master.

Germany.

Weakness of its chief, power of its members, imperial capitulations—vain formularies, convulsions, symptoms, dissolution, confederation of the Rhine, its aim.

America. Individuals; French, Dutch, German, Poles. Peace 1783, American independence, Washington, federal constitution, causes, morbid features, cure, prognostic. Its finances, Hamilton; the United States considered as a naval power, its history, its prospects; as a commarcial, its regulations; as a continental power, its prospects, interests. Its manufacturing exertions, prospects, obstacles, Robert R. Livingston, Humphreys, Custis. Shoals and beacons. Its literary state, wants, means.

General view of Europe and America in 1783.

Progress of the Dutch revolution—Prussia, England, France—Stadholderian, aristocratic, democratic factions, views, means, arms, issue, 1787; coup de grace, 1795; revolutionary mummery, death, mockery, remotion of the carcass, burial, 1 Apr. 1810,

Revolution in France, 1787.

Assembly of notables, 1789; church establishment declared national property; states general; national assembly; double representation of the commons; dissension among the three orders; fluctuating policy of the court; reunion of the three orders in one deliberative assembly; exclusion of the third estate (tiers etat) from their usual meetings; national assembly at Tennis court; oath, not to separate, till the constitution was formed, issue.—

Revolutionary progress, issue.

Guarding, arresting, imprisoning, beheading the king, family; general massacres, Paris, in the country.

Constitution of 1793, Gobet, Arch-bishop of Paris abjures the Christian religion, abolition of the Christian æra.

Factions, feuillans, mountain, Girondists, Jacobins.

Sanguinary government, Robespierre, &c. victories, views,

means. Directory, consuls, emperor; conquests, means, end.

Interior situation of the empire, external relations.

Sweden, Denmark, Prussia; war in 1812—13.

Fall of the Papal powers and hierarchy.

Continent Papal, 1798; Roman republic; Pius VII, 1802; concordat, genius, views, final overthrow.

Protestant Holland; abolishing the national church, 1796.

Saxony, toleration, edict.

England, Hoadley, &c. dissenters, catholic question.

Russia.

Situation, internal, relative, at the peace of Tilsit in 1805, Alexander, peace with England, acknowledgment of Ferdinand VII, war with Napoleon, treaty with Prussia, 1813.

England.

Situation, constitution, house of Stuart, Hanover; power;—priding herself in her strength as long she remains shielded by Providence; war with North America, its cause, 1812, motives, interests of both nations.

Portugal.

Internal situation, revolution in 1640, foreign relations with Great Britain since the treaty of John Methuen in 1703; with France since 1793; treaty of Madrid, 1801, 1804; Talleyrand's diplomatic engines, 1808; Junot's invasion, flight of the royal family, Brazil; conquests, expulsion of the French, issue.

Spain.

Bourbon race of Faineants; situation comparative under Philip II. with that of Philip V. Charles IV. internal, external.

Griefs, resources, Ferdinand VII. Napoleon, struggle, Lord Wellington, issue.

South America. Revolutionary attempt in Peru, Inca Tupac. Amaru, issue; his execution in 1781; new insurrection in 1801 in the plains of Riombamba.

Caraccas, Buenos-Ayres, Carthagena, Mexico; situation in 1813.

Effects and *consequences* in both hemispheres.

Europe. French Empire, Continent, Great Britain.

America. United States, South America, West Indies.

Asia. Indostan.

Africa. Slave trade, missionaries, Cape of Hood Hope.

General Observations.

Religion, manners, sciences, commerce, population.
Conclusion, situation in 18**.

HARVARD COLLEGE.

THE General Court of Massachusetts has recently manifested a disposition to afford patronage to the University and Colleges in the Commonwealth, honorable to the State, animating to the conductors of those seminaries, and highly satisfactory to all the friends of improvement. At the late session of the Legislature, Acts were passed appropriating to the important uses of those institutions, 16,000 dollars annually for ten years—10,000 dollars to the University at Cambridge; 3,000 dollars to Williams' College; and 3,000 dollars to Bowdoin College, to be paid out of the sums reserved to the Commonwealth from the taxes on the several banks in the State. The proceeds of one quarter part of the sums thus appropriated, are to be applied to reducing the expense of instruction to a certain portion of the students, according to the judgment of the Corporations of the respective Colleges.

Overseers of Harvard University.

AN Act was also passed for restoring the Board of Overseers of Harvard College, and making an addition thereto, by which the Board is to consist of the Governor, Lieutenant Governor, Council, Senate, Speaker of the House of Representatives for the time being, fifteen laymen and fifteen clergymen elected from time to time by the Board, with the President of the University:—the Act to be in force, when assented to by the Corporation and by the Board of Overseers, as established March 5, 1810. It is provided however that the Clergy who constituted a part of the same in March 5th, 1810, shall continue to be members as long as they retain their relation to their several parishes.

Rev. HEZEKIAH PACKARD of Wiscassett is appointed to deliver the Dudleian Lecture on the 2d Wednesday of May next.

THE subjects for the Bowdoin prize dissertatations for 1814 are as follows:

1. The importance of the doctrine of a future state.

2. A critical examination of those passages, from which it has been inferred, that the apostles believed the near approach of the day of judgment.

3. The foundation and extent of the duty of submission to civil government.

4. The importance of commerce, as a source of private and public wealth.

5. The different judgments of men on the morality of external actions, shown to be reconcileable with the certainty of moral distinctions.

6. Causes of the diversity of national character.

7. Comparative merit of ancient and modern eloquence.

8. The Æneid.

9. Causes that led to the greatness of the Roman power.

10. Characteristics of the Greek language.

Candidates will subscribe fictitious names to their dissertations; subjoining their academic standing, as resident-graduates or under-graduates; and of what class. They will accompany their dissertations with sealed letters, having the fictitious names, subscribed to the dissertations, on the outside, and the real names within; which letters will be burnt unopened, except those of the successful candidates, whose names shall be enrolled in the records of the Corporation and of the Immediate Government, and their productions be deposited in the University Library.

The highest premium is $30, or the first medal—the second premium is $20, or the second medal. Four of each will be assigned, if so many dissertations of sufficient merit shall be offered; the comparison being made between the dissertations of those students, who are of the same college standing.

The performances must be in the hands of the President by the middle of June, 1814.

The prize of twenty dollars, or the second medal, was assigned to John Gorham Palfrey, a member of the Sophomore

class, in July last—for a dissertation on the moral influence of history.

Joseph G. Cogswell, Esq. has been appointed a Tutor in the Latin language, to supply the vacancy occasioned by the resignation of Mr. Edward Everett, who has recently been ordained over the church in Brattle Street, Boston.

The number of Undergraduates at the beginning of the first term after commencement was as follows:

Senior class	64
Junior	77
Sophomore	74
Freshman	86
	301

SCHLEUSNER'S LEXICON.

It is now more than a year since we expressed our expectation, that the printing of this work would be immediately commenced. We were then disappointed. But we had hoped in our present number to announce the commencement of the printing, and some progress in the work. In consequence, however, of an unexpected delay in procuring suitable Hebrew types with the vowel points, it has not yet been begun. These types will soon be obtained, and the work will probably commence during April. Messrs. Cummings & Hilliard, and Whiting & Watson, are jointly concerned in the publication.

It is in a great measure through the patronage of the Corporation of Harvard University, that the work has been undertaken. They have subscribed for 200 copies, and advanced their price. By this act of judicious liberality, they have rendered a most important service to religion and theological science.

The price to subscribers for single copies, will be $12. And if the work should be well executed, to which end no pains or expense will be spared, it will be a cheap book.

NEWCOME'S HARMONY OF THE EVANGELISTS.

PROFESSOR STUART of the Andover Institution, has issued proposals for publishing this work. Harmonies of the Gospels are scarce among us, and their great utility to a theological student cannot be doubted.

Prof. Stuart in his prospectus says:—"The most considerable in modern times, are those of Chemnitius, Le Clerc, Michaelis, Macknight, and Newcome." We are sorry to see that he has omitted even the mention of that of Priestley, which we consider as decidedly preferable to any other that has been published; though we think it capable of amendment. One of the main principles on which it is constructed, the short duration of our Saviour's ministry, we think defensible by very strong arguments; and of course reject the supposition on which Newcome's harmony is formed, viz. that the ministry continued for three years.* That Professor Stuart, however, should speak with approbation of any work of Priestley's, was not perhaps to be expected. We think he deserves much praise for undertaking the present publication. Though we should consider the printing of the harmony of Priestley preferable to that of Newcome, yet as the former is not at present to be expected, we hope he will receive every encouragement. One of the principal advantages to be derived from a harmony, the easy comparison of parallel passages, may be afforded by any one which exhibits the whole of the text, unless it be constructed upon so absurd a principle as that of Macknight.

The conditions of publication are perfectly liberal; but for these we refer to the proposals. "The presumption is that the price will not exceed two dollars in boards, and it is hoped that it may be afforded for one dollar and a half."

LIBRARY OF HARVARD UNIVERSITY.

FOUR hundred and forty eight volumes were added to this Library during the year ending in September 1813.

* See a review of Carpenter's Chronology and Geography of the New Testament. Repository, vol. i. p. 424.

The use of the Library of Harvard University is extended with a liberality which we believe is almost without example, as it respects those of similar institutions. During the six last days of the week it is kept open, and all conveniences provided for reading and consulting books, and making extracts from them. All literary gentlemen are freely admitted. The privelege of taking books from the library, which is not allowed in a great proportion of the public libraries in Europe, is extended to a large number of persons, and is granted as widely and as liberally as possible, consistently with propriety. It has been lately given to settled clergymen residing within ten miles of Cambridge, and who have received an education at any College, or a degree at Harvard College. At the same time precautions are taking for the preservation of the more scarce and costly works, and such as cannot be replaced.

From the great value of this library, probably the most valuable on our continent; from the circumstance of the scarcity among us of many of the most important works that it contains; and from the ease with which access to their use may be procured, it is of most important and essential advantage to the literature of our country. Its preservation and increase ought to be objects of interest to all literary men, and to all those connected with literature. We therefore feel confident, that our suggestion will be favorably received, when we remind all publishers and printers, of the public benefit which would result from their presenting copies of all works which they may publish to this library. It is a library whose value does credit to our country, and which on that account we should take pleasure in augmenting; and it is connected with our most ancient literary institution, one at the present time highly respectable, and which has every prospect of increasing in importance. Those books which are sent to the library, will at once become known to a large body of literary men; and thus the private advantage of the publisher, as well as the public good, be in some degree promoted. We believe therefore that our suggestion will be attended to by a large portion of the gentlemen to whom we address ourselves.

It is to be wished that this library should become a reposi-

tory of all the original works published in our country which are of any value. The collection is at present very incomplete. We trust therefore that what has been said, will be thought deserving attention by American authors. If duplicates were given, one for circulation and another to be retained in the library, there would be more complete security against loss and injury. All original works that relate to the history of our country are particularly desirable;—and this though their size may be small; such as political pamphlets, those relating to ecclesiastical history, century sermons, &c. &c. Works of this character therefore, whether such as have been already published, or such as may be published hereafter, will be considered valuable.

We will again state our hope and belief that what we have proposed will be attended to; as it will be an easy means of promoting a great public good. It is by similar means that some of the most magnificent libraries in Europe have been accumulated to their present size. The public library at Paris, which contains nearly a million of volumes, receives a copy of every new work published in France; and in England, the Bodleian library, that of the British Museum, that of the Royal Society, with some others, have copies of new books sent to them by the Stationers' Company, or by individuals, either by law or by courtesy. We request those editors of newspapers who feel an interest in the promotion of literature, to republish this article.

THE EDITORS TO THE PUBLIC.

SOME apology is due to our subscribers, for the long interval which has elapsed between the publication of the present and last numbers of the Repository. Finding as we did that our subscription, which we had taken no recent measures to increase, was from various circumstances diminishing, and that our publishers did not feel authorised to give us much encouragement for the continuance of the work, and discouraged and interrupted in our labors by other circumstances, there seemed

to be a tacit understanding among us, that the present number should be the last. Partaking of the sensibility which is common to those whose pursuit of letters is one of their greatest sources of pride and pleasure, our pride was in some degree mortified, and our pleasure impaired, by finding what cost us a good deal of pains to prepare, was so little valued by others, that they took it but sparingly off our hands. While about to yield to these cheerless impressions, we were again animated by the favorable opinions and best wishes of many, whose praise we have every reason to value, and to believe sincere; and we are thus induced to make one more appeal to the public, with the hope that we shall be encouraged to continue our labors. Certain it is, that we are no contemners of public opinion, though it is not always infallible; and we have reason to believe that much pains has been taken to operate upon it to our disadvantage; but if we know ourselves, we are as much disposed to do something for our country towards the promotion of its best good in literature, and morals, and religion, as those who are more clamorous in their pretensions, and whose efforts are sometimes prospered by an appeal to the worst prejudices of the human heart.

The editors of the General Repository and Review, hitherto few in number, have experienced no small gratification in finding many of our first literary men disposed towards a cordial cooperation in supporting the work. They have consequently been enabled to form a society for conducting it, composed of gentlemen of various professions and pursuits, and hope by this means to give it greater variety, and to secure for it a more extended patronage.

The subjects of theology will, as heretofore, engage attention, and occupy about as large a part of the work as in the present number and that which preceded. The members of the society now formed, all claim to be liberal Christians. They of course claim the free exercise of the right of private judgment; and diversities of opinion respecting questions of minor importance, cannot therefore but exist among them. Some of these may perhaps appear in the course of the publication. What they believe to be true on subjects of morals, and

Christian doctrine, no one of them will fear to avow or defend, however much the popularity of the work may be endangered. On the principle on which it has always heen conducted, they are willing and desirous, that it should afford to every one, whatever may be his opinions, or however different they may be from their own, an opportunity for a fair hearing, if his manner of expressing them be decorous and manly. They do not believe that the free and unrestrained discussion which leads to truth on every other subject, will lead to error on the subject of Christianity.

Miscellaneous literature, and reviews, together with articles of intelligence, will occupy the larger portion of the work. It is to be remembered, that this work is the only one now existing among us, which, *if its design be fulfilled*, exercises any considerable supervision over the literature of our country. We have rejoiced to see the rapid improvement in the state of literature among us, and shall feel no small gratification if it be at all in our power to promote its progress. The voice of praise and the voice of censure are equally needed; and the former certainly not less than the latter; for our literary men have hitherto wanted almost every sort of reward except the intrinsic pleasure of their pursuits. The office of conferring praise therefore will always be to us a most pleasant one; and the task of inflicting censure, necessary as this often may be, we shall perform without any other fear than that of inflicting it unjustly. In our reviews, we shall endeavour to give such an account of different works, as may contain information concerning them sufficient for those not particularly interested in their subjects, and as may enable those who are so to judge of their merit.

We are desirous that our friends should not think it necessary, that their communications for the work should be always of considerable length; but that they should furnish us with any short pieces, on subjects of theology or literature, which may be interesting to the public.

In a work conducted as the present necessarily is, some inequality of merit is perhaps to be expected and pardoned. We have thus stated our intentions and wishes. We feel no other

interest in the work than as liberal Christians, and as men attached to literature; but feeling this interest, it will afford us gratification, if it should engage so much public attention and favor as may encourage us to think it worth our labor to continue it.

The next number will be published on the first of July.

Our readers are requested to notice the following errata in the review of Mr. English's publications and their answers, as some of them affect the sense.

Page 299, last line, for 'he,' read 'the.'
301, line 9, for 'these,' read 'their works.'
line 17, dele 'the,' before 'assailants.'
302, line 2, for 'view,' read 'vein.'
line 16, for 'facts,' read 'fact.'
303, line 25, dele 'the,' before 'opinions.'
304, line 25, for 'farther,' read 'further.'
308, line 2, from the bottom, dele the comma after 'scattered,' and put one after 'consternation.'
309, line 16, for 'acquired,' read 'required.'
line 18, for 'dreamed,' read 'dreamt.'
310, line 2, for 'farther,' read 'further.'
last line, dele 'to.'
311, line 12, for 'which,' read 'that.'

Other Errata in this volume.

Page 140, line 2 from the bottom, for 'provincial,' read 'provisional.'
144, line 17, for 'with that,' read 'with weapons.'
272, line 18, for 'article,' read 'arch.'
line 32, for '$\frac{1}{2}$ cosine A+sine A,' read '$\frac{1}{2}$ sine A.'
276, bottom, for '$\frac{1}{69}$.$_2$,' read '$\frac{1}{68}$.$_5$.'
277, line 10, for 'Polygnometry,' read 'Polygonometry.'
line 26, for 'that loss,' read 'that the loss.'
278, line 3, for 'and their,' read 'and then their.'
280, line 22, for 'letter o,' read 'a letter.'
line 25, for 'mistake,' read 'mistakes.'
line 32, for 'of quantities,' read 'of finite quantities.'
327, for 'pears,' read 'peas.'
337, note, for 'forty,' read 'thirty.'

METEOROLOGICAL TABLE CONTINUED.

1813	7 A. M. Greatest heat.	Mean.	Least.	2 P. M. Greatest	Mean	Least	9 P. M. Greatest	Mean	Least	Gen. M	Rain & sn. dis'd. In. hun.	snow
July	80°	66°	57°	93°	79°·3	70°	78°	66°·7	57°	70°·7	5·48	
Aug.	74	65·7	49	95	82·9	67	77	67·7	56	72·1	1·66	
Sept.	78	60·1	47	93·5	75·6	51	82	63·6	50	66·5	4·00	
Oct.	63	44·3	23	73	57	40	64	46·9	28	49·2	5·48	
Nov.	62	34·9	30	70	48·5	30	62	38·3	26	40·6	4·84	2
Dec.	36	22·7	5	48	34·4	19	48	26·7	9	27·9	3·04	2·5
1814												
Jan.	32	18	-4	42	29	5	33	20·1	0	22·4	2·09	12·5
Feb.	40	23	1	49	35·5	9	44	27·3	3	28·6	3·04	10·0

Quantity of rain and snow reduced to water, in inches and hundredths, for the year ending Dec. 31, 1813 } 45·90

Quantity of snow 38·50

Mean temperature of the winter of 1812—13 25·95
spring of 1813 43·22
summer 69·47
autumn 52·10
year 47·68
winter of 1813—14 26 30

The first of the following tables shows the mean temperature of the coldest day and warmest day of each year, from 1790 to 1812, inclusive, obtained by taking the mean of three observations on each of the said days, together with the time of their occurring, the direction and force of the wind, and face of the sky. The figures 1, 2, 3, express the different degrees of force of the wind. *Clear* is used to denote very few clouds, and *cloudy* more clouds than clear sky. At the bottom of this table are subjoined the most remarkable periods of extreme cold and heat. Mean height of the mercury in the Barometer during the cold days 30·165, ditto during the warm days 29·935, difference 0·23. The time and place of observation are the same as before given, No. iii. p. 208.

The second table is intended to show the influence which the winds blowing from different points of the compass have upon our climate. The several numbers are the means of a large number of observations, continued for twenty years. The observations are taken for fair weather and foul, for morning, noon and night, during the winter and summer months; and they are so selected and detached from all other circumstances affecting the thermometer, as to exhibit as fairly as possible the simple effect of the direction of the wind upon the temperature of the air. The first part of the table is made from observations taken with an internal thermometer; the second from observations with a thermometer exposed to the external air. Below the observations for the months in each part of the table, are subjoined the means of the summer and winter observations, for morning, noon, and night, and the mean of these means.

Times	M. tem.	Wind	Weather
1790 Feb. 9	4·3	NW	clear
91 Dec. 19	—1	W 1 SW 1	clear
92 Jan. 23	—8	NW 2	clear
93 Feb. 1	5	NW 1	few cl.
94 Dec. 27	4	W 3	cloudy
95 Feb. 26	3	NW 3 W 2	clear
96 Jan. 31	7·2	NW 1	clear
97 Jan. 8	—7·5	NW 2	no cl.
98 Feb. 8	5	NW 2	no cl.
99 Jan. 5	—3	NW 2	no cl.
1800 Jan. 29	4·7	NW 2 W 2	no cl.
01 Jan. 3	4·7	NW 2 N 1	clear
02 Feb. 23	3·3	NW 3	clear
03 Dec. 17	2·3	NW 2	clear
04 Jan. 21	4·2	NW 1 W 1	no cl.
05 Dec. 14	5	NW 1	few cl.
06 Jan. 16	3·3	W 1 SW 2	no cl.
07 Jan. 26	—6·5	NW 1 W 1	no cl.
08 Jan. 16	6·3	W 1	clear
09 Feb. 4	4·7	NW 2 W	clear
10 Jan. 19	—4·3	W 3	clear
11 Feb. 22	4·7	W NW	cloudy
12 Jan. 18	—5·7	NW 1	no cl.
1792 Jan. 22	3	NW 3	cloudy
23	—8	NW 2	clear
24	4	NW 2	cloudy
1797 Jan. 7	6·5	NW 1	few cl.
8	—7·5	NW 2	no cl.
9	1·2	NW 1	no cl.
10	9·5	NW W	few cl.
1807 Jan. 19	7·3	NW 1 W 1	no cl.
20	11·3	W 1 SW 1	no cl.
21	17	W 1	no cl.
22	0	NW 1 W 1	few cl.
23	7	NW 1	cloudy
26	—6·5	NW 1 W 1	no cl.
27	7	NW 1 N 1	cloudy
1810 Jan. 19	—4·4	W 3	clear
20	—3	W 3	clear
21	—0·7	W 2	clear
22	7·3	N NW	cloudy
1812 Jan. 16	4·7	NW W	cloudy
17	4	N NW	cloudy
18	—5·7	NW 1	no cl.
19	0·7	NW 2	cl. & sn.
20	7·7	NW 1	cl. & sn.
21	2	W 2½	few cl.
22	—2·7	W	clear

Times	M. temp.	Wind	Weather
Aug. 14	82°	SW	cloudy
July 13	82	SW 2	cloudy
Aug. 19	81	SW 2	clear
July 5	83	SW 2 W 3 E 1	cloudy
July 18	81	SW 2	few cl.
Aug. 7	84·2	W NW	cloudy
July 12	80·7	SW 2	cloudy
July 22	80·8	W 1 SW 2	cloudy
Aug. 9	85·2	W 2 SW 2	cloudy
Aug. 1	80·3	W 1 S 2	few cl.
July 6	80·3	W 2 NW 2	few cl.
July 2	85·7	SW 1	few cl.
July 23	84·2	SW 1	few cl.
July 10	84·3	W 2	few cl.
July 10	83	SW 1 W 1	cloudy
July 13	85	SW 1 W 1	few cl.
July 27	81	W 1 SW 1	cloudy
Jun. 10	81·3		
July 17	82·8	N W	few cl.
July 10	79·3	W 1	few cl.
Aug. 29	78·3	SW	cloudy
July 4	88·2	W E	few cl.
July 4	75·3	W 1 SW	few cl.
1795 Aug. 5	80	NW 1	few cl.
6	82	SW 1 W	few cl.
7	84·2	W 1 NW 1	cloudy
10	80	SW 1 W 1	cloudy
1801 July 1	82·7	SW 1	cloudy
2	85·7	SW 1	few cl.
3	80·3	SW 2	cloudy
7	81·7	NW 1 SW	few cl.
1803 July 7	80·3	SW 1	few cl.
8	81·7	S 1 SW 1	cloudy
9	83·5	W 2	clear
10	84·3	W 3	clear
1805 July 12	83·7	SW 2	cloudy
13	87	SW 2	few cl.
15	84	S 1 W 1	few cl.
16	86	SW 1	few cl.
17	80	SW 2	few cl.
1811 July 3	84	SW W	cloudy
4	88·2	W E	few cl.
5	86·3	W	few cl.
6	86·2	W	clear
Aug. 19	82·7	SW S	few cl.
20	86	W	no cl.
21	82	SW E	few cl.
22	81	E SW	cloudy

		Fair								Cloudy							
		N	NE	E	SE	S	SW	W	NW	N	NE	E	SE	S	SW	W	NW
		°		°	°	°	°	°	°	°	°	°	°	°	°	°	°
Dec.	M.	25		36	36	25	33·5	26	19	31	35·3	36	35·7	34·2	32	26·3	24
	N.	33		38	42	38·6	36·8	34·2	27	34	35·3	40	45·3	36	37	35·5	30
	E.	80		33	36	40	29·3	28	22	32	29	38	34	33·4	35	34·5	29
Jan.	M	18·5		14	24	30	24·6	9·3	13·5	23	30·5	32	39	41	25·4	12·5	18
	N.	27·5		36	36	39	25·8	25·2	26·5	28	32	35	42	42	37·6	29	29·1
	E.	22		28	26	30	23·8	15·8	17·8	26	25·5	35	40	39	32·5	28·5	27·7
Feb.	M	18	26	35	29	24·4	27	12·3	17·1	28	33	32	30	31·3	28·5	24·8	25·2
	N.	27	35	37	30	36·4	43·6	31·5	30·3	33	35·5	36	34	38·4	39·7	31·8	35·7
	E.	21	32	39	21	33·3	28·5	26·8	22·5	29	34	34	30	36·9	36·5	25·6	32·6
Mean	M.	20·5	26	28·3	29·7	26·4	28·2	15·9	16·5	27·3	32·9	33·3	34·9	35·5	28·6	21·2	22·4
	N.	29·1	35	37	32·7	38	35·3	30·3	27·9	31·7	34·3	37	40·3	38·8	38·1	32·1	31·6
	E.	24·3	32	33·3	27·6	35·1	27·4	23·5	20·8	29	29·5	35·7	34·7	36·4	34·7	29·2	29·8
Gen. m.		24·7	31	37	31·1	33·1	30·3	23·2	21·7	29·3	34·1	35·3	36·7	36·9	33·9	27·5	27·9
June	M	59	54·5	56·7	62·4	55·6	64·6	64·6	62·4	62·4	59	60·1	64·6	64·6	68	64·7	58
	N.	73·6	64·6	68	73·6	75·9	79·2	79	73·6	64·6	62·3	66·9	66	73	75·8	71	66·9
	E.		57·9	62·4	64·6	64·6	72	64·6	62·4	55·6	55·5	62·4	64·6	67	71·3	70·2	64·6
July	M	68	64·6	64·6	65·7	68·7	68	67·1	62·2	61·5	63·9	66·8	69·1	67·6	71	69·5	65·5
	N.	70·2	71·5	76·4	75·8	83·1	83·1	80·7	80·8	74	66·9	77·5	75·8	79·2	87	80·1	72·7
	E.	64·2	56	57·5	71·3	70·6	72·5	70·6	62·5	65	64	67·7	72·5	70·3	71·3	69·3	68
Aug.	M.	60·1	71·3	56·7	63·6	66·8	69·1	68	62·3	64·8	64·8	65·7	66·8	71	70·2	66·8	65·7
	N.	77	52·2	73·6		80·3	78	73·6	74·7	70·2	68·2	73·6	73·6	71·5	77·2	82·6	77·2
	E.			66·8	71·3	72	72	69·1	66·8	65·7	64·8	66·8	71·3	69	72	73·6	71·3
Mean	M.	62·3	63·5	59·3	63·9	63·7	67·2	66·6	62·3	62·9	62·6	64·2	66·8	67·7	69·7	67	63
	N.	73·6	62·7	72·7	74·7	79·8	80·1	77·8	76·3	69·6	65·8	72·7	71·8	74·6	80	77·9	72·3
	E.	64·2	56·9	62·2	69·1	69·1	72·2	68·1	63·9	62·1	61·4	65·6	69·5	68·8	71·5	71	67·9
Gen. m.		66·7	61	64·7	69·2	70·9	73·2	70·8	67·5	64·8	63·3	67·5	69·3	70·3	73·7	71·9	67·7
Dec.	M.	27·3		37	30	23·5	32	14·6	22·1	30·7	36·5	38·4	37·1	34	38·5	30	25·3
	N.	32·7		41	37	39	43·5	23·5	32	33·7	40·7	41·1	44·7	39·7	40·5	37	32·7
	E.	29·5	31	33·5	37·5	32·5	33·7	20·2	29	33·7	34·1	37·5	34·7	39·3	37·3	35	31·8
Jan.	M.	20	40			29·5	33·1	27·3	17·3	28	31·3	30	19·5	31·4	37	28	26·2
	N.	30·3	40	40	36	37·7	40	33·3	22·3	31·3	32	33	36·8	40·3	46	33	28·7
	E.	20			33	33·7	28·3	27	17·3	28·8	32·3	32	36	38	41	29·5	22·3
Feb.	M.	10·3			33	37	23·5	8·5	15	21·5	24·3	29·5	34·5	41·5	37	12·2	22·5
	N.	25·7	31·7	35	35·7	42·3	39·2	17	29·2	26·1	34·3	34·3	40·5	43·8	40·5	26	29·4
	E.	15			21·8	38·5	31·2	8	16·3	24·7	30·5	31·1	30·7	38·3	39	17	24·7
Mean.	M.	19·2	40	37	31·5	30	29·5	16·8	18·1	26·7	30·7	32·6	30·4	35·6	37·5	23·4	24·7
	N.	29·6	35·8	38·7	36·2	39·7	40·9	24·6	27·8	30·4	35·3	36·1	40·7	41·3	42·3	32	30·3
	E.	21·5	31	33·5	30·8	31·6	31	18·4	20·9	29	32·3	33·5	33·8	38·5	39·1	27·2	26·3
Gen. m.		23·4	35·6	36·4	32·8	33·8	33·8	19·9	22·3	28·7	32·8	34·1	35	38·5	39·6	27·5	27·1
June	M.	58	60	53·5	61·5	60·2	62·5	55	55·7	60·7	63·5	60·3	62·5	66·3	65	68·7	63
	N.	73·5		70·5	81·5	77·8	83·7	77	72·3	69·7	67	68·7	70·5	71	89·5	73	72·8
	E.	51	59	59	61·5	62	72·5	67	54·5	71	56·3	55·5	66·5	64·5	66·5	65·7	65·3
July	M.	63·3	60	64	69	67·5	71·7	70·7	57·7	63	68	72·3	68·7	68·3	74·5	71	63
	N.	74	72	75·7	80	81·2	88	84·2	77·5	75	70·5	72·3	74·2	80·3	89	73	74·5
	E.			65·7	72	62	74	73	63·3	67·5	64·3	68·7	65·5	70·3	79	70	70
Aug.	M.	60	63	54	62	64	68	70·5	69·3	67	66	65·7	65	73	72·3	76	71·5
	N.	78	78	76·7	75.2	87·7	87	82·5	82	76·5	66·3	73·5	77	88	80·5	88	84
	E.	61	63	61·5	65	72·3	74·2	74·3	66	70	66·7	68	70	72·5	73	71	76
Mean	M.	60·4	61	57·2	64·2	63·8	67·4	65·4	60·9	63·6	65·8	66·1	65·4	69·2	70·6	71·9	65·8
	N.	75·2	75	74	78·9	82·2	86·2	81·2	77·3	73·7	67·9	71·5	73·9	79·8	86·3	78	77·1
	E.	56	60·7	62·1	66·2	68·8	73·6	71·4	61·3	69·5	62·4	64·1	67.3	69·1	72·8	68·9	70·6
Gen. m.		63·9	65·6	64·4	69·8	71·6	75·7	74	66·5	68·9	65·3	67·2	68·9	72·7	76·6	72·9	71·2